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ALIGNMENTS

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AAR45437 standard; protein;

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Insulinotropin derivative

27-JUN-1994 AAR45437;

(first entry)

Claim_3; Page 20; 32pp; English New derivs. of glucagon-like peptide 1 and insulinotropin - used for enhancing insulin action in a mammal, partic. by iontophoretic admin. WPI; 1994-007457(01) Insulinotropic; activity; enhancing insulin activity; treatment; Type II diabetes. Andrews GC, Daumy GO, (PFIZ) PFIZER INC. 15-JUN-1992; 14-APR-1993; 23-DEC-1993 W09325579-A Synthetic. 9205-0899073 93WO-US03388 Francoeur ΧĽ, Larson

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                                                                                which peptide is GLP-1(7-34) [GLP = glucagon-like peptide]; a truncated) deriv. Of GLP-1 GLP-1 and its deriv s are useful in the treatment of Non-Insulin Dependent Diabetes Mellitus (NIDDM). During processing in the pancreas and intestine, GLP-1 (AAR63245) is converted to a 31 amino acid peptide having amino acids 7-37 of GLP-1, alternatively referred to as insulinotropin. GLP-1(7-37) has insulinotropic activity, ie. it is able to stimulate, or cause to be stimulated, the synthesis of the hormone insulin. Other derivs. of GLP-1 are shown in AAR63246-51. It has been discovered that prolonged plasma elevations of GLP-1, and related polypeptides, are necessary during the mean and beyond to achieve sustained glycemic control in patients with NIDDM. The invention provides a compsn. that has prolonged action after each administration.
                                                                                                                                                                                                                                                                                                                                                   Danley
Qi H,
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                                                                                                                                                                                                                                                 Claim 2; Page 46; 70pp; English.
                                                                                                                                                                                                                                                                          Treatment of non-insulin dependent diabetes melliwus - uglucagon-like peptide 1 or deriv. with prolonged action sustained glycaemic control
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                                                                                                                                                                      The present sequence is a pharmacologically active peptide hormone (PH) derivative, where the parent PH, glucagon like peptide 1, has been modified by introducing a carboxy-terminal lipophilic substituent, specifically tetradecancyl, giving it a protracted profile of action in the body compared to the parent PH.
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                         AAW02644 standard; Peptide;
                                                                                                                                                        Sequence
                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                               New peptide hormone derivs. - having a lipophilic substit. introduced into the N-terminal or C-terminal for a protracted profile of action.
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                                                                                                                                                                                                                                                                                                                                                                      The present sequence is that of residues 7-34 of glucagon-like peptide-1 (GLP-1 (7-34)). Compsns. contg. a GLP-1 cpd. and a phenolic and/or an alcoholic aromatic cpd. result in a thixotropic gel showing a protracted release of the active GLP-1 cpd.. The compsns. can be used as insulinotropic agents in the treatment of diabetes. In partic. GLP-1 (7-37) is used in the examples of the invention (sequence not given).
                                                                           W09617942-A1
                                                                                                                         Fusion protein construct; isolation; growth hormone releasing factor, gluc
                                                                                                                                                                                                                 AAR98950
                  07-DEC-1994;
                                     07-DEC-1995;
                                                                                                               parathyroid
                                                                                                                                                      Target peptide
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BIONEBRASKA INC
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                                                                                                                                                                                                                                                                                                      Score 144; DB 17;
Pred. No. 1.7e-14;
; Mismatches 0;
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                                                                                                                          glucagon-like
                                                                                                                                                     fusion protein
                                                                                                                 carbonic
                                                                                                                                  purification;
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                                                                                                               e peptide 1,
anhydrase.
                                                                                                                                                                                                                                                                                                       Indels
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                                                                                                                                                                                                                                                        11-MAR-1998;
12-SEP-1997;
23-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Diabetes mellitus; obesity; therapy; treatment; hormone; cAMP; cyclic adenosine monophosphate; cyclic nucleotide degradation; cyclic guanosine monophosphate; antidiabetic; hypoglycaemic; acromegaly; anti-obesity; non-insulin-dependent; mature onset; pancreatic disease; secondary hyperglycemia; pancreaticis; pancreasectomy; pheochromocytoma; hemochromatosis; endocrine disease; Cushing's syndrome; latrogenic; hyperthyreosis; benzothiadiazine saliuretic; diazoxide; glucocorticoid; pathological glucose tolerance; hyperglycemia, dyslipoproteinemia; hyperglycemia, dyslipoproteinemia;
                                  WPI; 1999-244026/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A new method for the isolation and/or purification of a recombinant peptide employs a fusion protein construct (FPC) comprising a carbonic anhydrase and a variable fused polypeptide containing a target peptide. The method comprises precipitating either the FPC a fragment of the FPC including the carbonic anhydrase. An alternative method of producing the peptide comprises expressing the FPC as part of an inclusion body. The target peptides of the FPC ar derived from growth hormone releasing factor (GFP), glucagon-like peptide 1 (GLP1) or parathyroid hormone (PTH). This sequence corresponds to amino acids 7-34 of GLP1.
                                                                                                           Adermann K,
                                                                                                                                                                                                                                                                                                                                                                                                          11-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW93527 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence

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                                                                                                                                                                                (FORS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hyperlipoprotenemia;
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                                                                                                                                                                                FORSSMANN W
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                                                                                                       Forssmann
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                                                                                                                                                                                                                                                        98DE-1010515.
97DE-1040081.
97DE-1057739.
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                                                                                                                                                                                                                                                                                                                                                                                                          98WO-EP05804
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                                                                                                           WG,
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Pred. No. 1
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.7e-14;
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                 The present sequence is a modified Glucagon Like Peptide (GLP) fragment This sequence is composed of residues 7 to 34 of GLP, and was produced by attempted clostripain catalysed amidation of another modified GLP fragment (AAB07291) at pH 7.9. Hydrolysis at Lys34 occured to produce t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-NOV-1998;
16-DEC-1998;
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                                                                                                                                                                                                                                                                         Preparation of peptide with C-terminal alpha-carbo
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Pred. No. 1.7e-14;
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                                                                                                                                                                                                                                                                                                                                                                                                  Wagner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LP; clostripain;
like peptide.
                                                                                                                                                                                                                                                                                        amide residue,
                                                                                                                                                                                                                                                        substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       least two of the
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                          produce the
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1 HAEGTETSDVSSYLEGQAAKEFIAWLVK 28

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RESULT
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Best Local
Matches 2
Query Match
Best Local Similarity
Matches 28; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present sequence. The expected product would have had a C-terminal alpha-carboxamide residue. The peptide of AAB07291 was treated with ammonia reagent and clostripain (also known as clostridopeptidase B) Clostripain is an extracellular thiol endoprotease from Clostridia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostripain cleaves arginine containing peptides amidatively at
                                                                                           This sequence represents a glucagon-like peptide-1 (GLP-1) fragment. GLP-1 is a hormone normally secreted by neuroendocrine cells of the in response to food. GLP-1 fragments or Extendin-4 growth factor fragments can be used in the production of a population of insulin producing cells from a population of non-insulin producing cells to be used to promote pancreatic amylase producing cells to produce both insulin and amylase. The methods are used to tidiabetes mellitus (type 1) in humans, domesticated animals, livestock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Glucagon-like peptide-1; GLP-1; insulin producing diabetes mellitus type 1; human; livestock; pet.
                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY78952 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY78952;
                                                                                                                                                                                                                                                                                                                                (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                        10-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                10-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                         24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200009666-A2
                                                                                                                                                                                                          Disclosure;
                                                                                                                                                                                                                                    mellitus
                                                                                                                                                                                                                                                          Differentiation of
                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
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                                                                                                                                                                                                                                                                                  2000-205999/18
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28; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide bond.
                                                                                                                                                                                                                                            tiation of non-insulin producing glucagon-like peptide-1 or exter
                                                                                                                                                                                                                                                                                                          Perfetti R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                              28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                          Page 16;
100.0%;
ilarity 100.0%;
Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
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                                                                                                                                                                                                             English
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  Score 144; DB 21,
Pred. No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                           A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLP-1 (7-34).
                                                                                                                                                                                                                                                 ucing cells into insulin-producing extendin-4, used to treat diabetes
                                                                                                                                                                                                                                                                                                           Greig
                                                                                                                                                                                                                                                                                                             'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                              Holloway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell; insulin; amylase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                          Length
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                                                                                                    livestock and
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                                                                                                                  treat
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RESULT 1
AAG63270
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AAE09258
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                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                          Matches
                                                                                                                                                                                                                                             The present sequence is a human glucagon-like peptide-I related molecule (GLP)-I derivative. The single tetragonal flat rod-shaped or plate-like crystals of a GLP are prepared from a crystallisation solution containing a GLP, a buffering agent, an alcohol or a mono or disaccharide and optionally ammonium sulphate or zinc. The GLP crystals are used in manufacturing process, in pharmaceutical formulations for treating diabetes, obesity or related conditions in mammals.
                                                                                                                                                                                                                                                                                                                                                 Glucagon-like peptide-1 crystals for treating diabetes are prepared from mother liquor containing glucagon-like-peptide-1 related molecules dissolved in buffered solution and alcohol -
Glucagon-like peptide 1; GLP-1; soluble GLP-1.
                   Amino acid sequence of glucagon-like peptide 1
                                         01-OCT-2001
                                                                              AAG63270 standard;
                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; glucagon-like peptide-1 related molecule; GLP; GLP crystal; manufacturing process; pharmaceutical formulation; therapy; diabet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE09258 standard; peptide;
                                                             AAG63270;
                                                                                                                                                                                                                                                                                                                              Disclosure; Page 11; 17pp; English.
                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-529113/58.
                                                                                                                                                                                                                                                                                                                                                                                                              Hermeling RN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2001014666-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE09258;
                                                                                                                                                                                                                                                                                                                                                                                                                                   (NARA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HERM/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                    Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               glucagon-like
                                                                                                                                                                          28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      HERMELING R N.
                                                                                                                                                                                                                                                                                                                                                                                                                                            HOFFMANN J
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                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative
                                        (first entry)
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                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               process; pharmaceutical formulation; therapy; diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                              Hoffmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0209799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0209799
                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide-1 related molecule
                                                                                                                                                                                                                                                                                                                                                                                                              JA,
                                                                                                                                                                          0
                                                                                  28
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                                                                                                                                                                        Score 144; DB 22;
Pred. No. 1.7e-14;
); Mismatches 0;
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                    (GLP-1) analogue
                                                                                                                                                                                          Length 28;
                                                                                                                                                                          Indels
                                                                                                                                                                         0
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AAG63273
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Best Local S
Matches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence represents a glucagon-like peptide 1 (GLP-1) analogue. The specification describes a method for preparing a GLP-1 compound that is soluble in aqueous form at pH 7.4 from a GLP-1 compound that is insoluble in aqueous form at pH 7.4. The method comprises dissolving the insoluble compound in aqueous base or acid; neutralizing the GLP-1 solution to a pH at which no amino acid racemisation of the GLP-1 compound occurs; and isolating GLP-1 from the neutralized solution. The method is used to prepare a soluble form of a GLP-1 compound. The soluble form of GLP-1 is physiologically active.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Preparing a Glucagon-like peptide 1 compound soluble in aqueous solution at pH 7.4, comprises dissolving the insoluble form in base or acid and neutralizing the solution -
27-JAN-2000;
09-AUG-2000;
                                         16-JAN-2001;
                                                                     02-AUG-2001.
                                                                                                 WC200155213-A2
                                                                                                                           Synthetic
                                                                                                                                                     Glucagon-like
                                                                                                                                                                                 An insoluble glucagon-like peptide 1 (GLP-1) compound
                                                                                                                                                                                                             01-OCT-2001
                                                                                                                                                                                                                                         AAG63273;
                                                                                                                                                                                                                                                                    AAG63273 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 12; 49pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-JAN-2000; 2000US-0178438
09-AUG-2000; 2000US-0224058
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prouty WFJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-JAN-2001; 2001WO-US00010
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                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 28; Conserv
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                                                                                                                                                                                                                                                                                                                                       1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 144; DB 22; Ilarity 100.0%; Pred. No. 1.7e-14; Conservative 0; Mismatches 0;
                                          2001WO-US00010
2000US-0178438
2000US-0224058
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                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                     peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "this residue
                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                       1;
                                                                                                                                                       GLP-1; soluble GLP-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
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                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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Best Local S
Matches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence represents an insoluble glucagon-like peptide 1 (GLP-1). The specification describes a method for preparing a GLP-1 compound that is soluble in aqueous form at pH7.4 from a GLP-1 compound that is insoluble in aqueous form at pH7.4. The method comprises dissolving the insoluble compound in aqueous base or acid; neutralizing the GLP-1 solution to a pH at which no amino acid racemisation of the GLP-1 compound occurs; and psoluting GLP-1 from the neutralized solution. The method is used to prepare a soluble form of a GLP-1 compound. The soluble form of GLP-1 is physiologically active.
                                                                                                                                                                                                                                                                                                                                                                                                                                           05-MAY-1986;
26-JAN-1988;
01-JUN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Preparing a Glucagon-like peptide 1 compound solution at pH 7.4, comprises dissolving the base or acid and neutralizing the solution
                The sequence given is derived from glucagon-like peptide 1 (GLP-1) and has a higher insulinotropic activity than GLP-1 (1-36) and GLP-1 (1-37). The peptide may be modified to a acid addn. or carboxylic acid addn.salt or lower alkyl ester and amide (lower (di)alkyl amide)
                                                                                                                                                                                                  New glucagon-like activity and are u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US5118666-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLP-1 derivative.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR24524 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ELIL ) LILLY & CO
                                                                                                                                                                                                                                                                                 WPI; 1992-208235/25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-JUN-1992.
                                                                                                                                                   Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-MAY-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                           Habener
                                                                                                                                                                                                                                                                                                                                                                                          (GEHO ) GEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      y Match 100.0%;
Local Similarity 100.0%;
hes 28; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-476192/51.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              onset
                                                                                                                                                   Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28
                                                                                                                                                                                                                                                                                                                                                                                               HOSPITAL CORP
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                                                                                                                                                                                                        are used
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                                                                                                                                                   20 and Fig 1; 16pp;
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88US-0148517.
90US-0532111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diabetes mellitus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86US-0859928
                                                                                                                                                                                                        peptide 1 derivatives - have insulinotropic used to treat Diabetes mellitus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 144; DB 22;
Pred. No. 1.7e-14;
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                                                                                                                                                   English.
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AAR63248 ID AAR6

AAR63248 standard; peptide;

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RESULT

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RESULT :
AAR45436
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   derivative. These modified derivatives have the same insulino activity as the original GLP-1 derivative. These peptides are in the treatment of maturity onset diabetes mellitus (MODM). May also be used in the study of MODM pathogenesis. Dosages cadministered intravenously, intramuscularly or subcutaneously.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                           The sequence is that of a derivative of insulinotropin which has insulinotropic activity and is useful for enhancing insuaction in a mammal, partic, for treating Type II diabetes (claimed). It is partic, suited for delivery to a mammal by
                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR45436 standard;
                                                                                                                                                                                  Claim 3; Page 20; 32pp; English.
                                                                                                                                                                                                    New derivs. of glucagon-like peptide 1 enhancing insulin action in a mammal, [
                                                                                                                                                                                                                                                        Andrews
                                                                                                                                                                                                                                                                           (PFIZ ) PFIZER
                                                                                                                                                                                                                                                                                                 15-JUN-1992;
                                                                                                                                                                                                                                                                                                                     14-APR-1993;
                                                                                                                                                                                                                                                                                                                                          23-DEC-1993
                                                                                                                                                                                                                                                                                                                                                             WO9325579-A.
                                                                                                                                                                                                                                                                                                                                                                                                      Type II diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                     Insulinotropin
                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-JUN-1994
                                                                                               Sequence
                                                                                                                   ionophoresis.
                                                                                                                                                                                                                                                                                                                                                                                                                 Insulinotropic;
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1994-007457/01.
                                             28;
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                                                    Similarity
                                                                                            29 AA;
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                                          100.0%;
llarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                       Daumy GO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                      derivative
                                                                                                                                                                                                                                                                                                  92US-0899073
                                                                                                                                                                                                                                                                                                                      93WO-US03388
                                                                                                                                                                                                                                                                                                                                                                                                                activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score
100.0%; Pred.
                                                                                                                                                                                                                                                         Francoeur ML,
                                                                                                                                                                                                                                                                                                                                                                                                                 enhancing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
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                                             0;
                                                       Score 144;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e 144; DB 13;
. No. 1.8e-14;
smatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                  insulin activity;
                                                                                                                                                                                                      l and insulinotropin - use
partic. by iontophoretic
                                                                                                                                                                                                                                                          Larson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      have the same insulinotropic ve. These peptides are used
                                             DB 15;
1.8e-14;
es 0;
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                                                                Length
                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dosages can
                                                                                                                                                                                                                                                                                                                                                                                                                   treatment;
                                                                                                                                                    insulin
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                                                                                                                                                                                                                                                                                                                                                                This peptide is GLP-1(7-35) (GLP = glucagon-like peptide), a truncated deriv. of GLP-1. GLP-1 and its deriv.s are useful in the treatment of Non-Insulin Dependent Diabetes Mellitus (NIDDM). During processing in the pancreas and intestine, GLP-1 (AAR63245) is converted to a 31 amino acid peptide having amino acids 7-37 of GLP-1, alternatively referred to as insulinotropin. GLP-1(7-37) has insulinotropic activity, ie. it is able to stimulate, or cause to be stimulated, the synthesis of the hormone insulin. Other derivs. of GLP-1 are shown in AAR63246-51. It has been discovered that prolonged plasma elevations of GLP-1, and related polypeptides, are necessary during the meal and beyond to achieve sustained glycemic control in patients with NIDDM. The invention of CLP-1 are shown in that he control in patients with NIDDM. The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (PFIZ )
                        cleavage
                                     Glycogen
                                                               Glycogen
                                                                                                                                          AAR69075 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                       provides a compsn. that has prolonged action after each administration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treatment of non-insulin dependent diabetes mellitus - using glucagon-like peptide 1 or deriv. with prolonged action for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Danley DE, (
Qi H, Oih,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP619322-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 insulinotropic activity; GLP-1; glucagon-like protein 1; NIDDM; non-insulin dependent diabetes mellitus; insulintropin; truncat
Synthetic
                                                                                         23-AUG-1995
                                                                                                                   AAR69075;
                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 2; Page 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sustained glycaemic control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1994-311774/39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-FEB-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-MAY-1995
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l Similarity 100.0%;
28; Conservative (
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PFIZER CORP.
                                      Like
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                                                                                                                                                                                                                                                                                                                             29 AA;
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, Hong Q,
                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                     Peptide; endopeptidase;
                                                               Peptide 1 (7-34) + G-R-NH2, G-R-G or G-R-G-NH2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93US-0044133
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^ Yesook
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Geoghegan KF,
sook K;
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                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                            Score 144; DB 15;
Pred. No. 1.8e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for use in treating
                                                                                                                                             8
                                                                                                                                                                                                                                                               Mismatches
                                     transpeptidation; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kim Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lambert WJ;
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                                                                                                                                                                                                                                                                The native or naturally occurring sequence of growth hormone releasing factor is AAR69073. A pharmaceutical compsn. of GRF(1-44)-MH2 produced by the method of the invention is claimed. AAR69075 does not seem to be referred to the patent application application in the claims where a polypeptide with this sequence produced by the method of the invention is claimed. The peptide appears to Glycogen Like Peptide I residues 7-34 plus a carboxy terminal
                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                    group for
                                                                                                                                                                                                                                                                                                                                                                                               Claim 22; Page 58; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Transpeptidation of recombinant polypeptides - using endopeptidase such as trypsin or thrombin to modify C-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1995-075233/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BION-) BIONEBRASKA INC
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Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                               residue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Henriksen
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completed: July 30, me: 633 sec
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                                                                                                           1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                                                                                                                                                                                                                   trypsin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label= G-R-NH2; G-R-G,
                                                                                                                                                                                                                                                        cleavage.
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              2002, 08:45:32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Partridge
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                                                                                                                                         Score 144; [Pred. No. 1.8]; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OR G-R-G-NH2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stout
                                                                                                                                         DB 16;
.8e-14;
s 0;
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                                                                                                                                            Indels
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Result
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Listing first 45 summaries
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                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq
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1: /cgn2_6/ptodata/2/
2: //gn2_6/ptodata/2/
3: /cgn2_6/ptodata/2/
4: /cgn2_6/ptodata/2/
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6: /cgn2_6/ptodata/2/
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Gapop 10.0 ,
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Copyright (c) 1993 - 2000 Compugen Ltd
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
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28 144 100.0 31 1 US-08-470-220A-3 Sequence 3, Appli 31 2 US-08-807-363-3 Sequence 3, Appli 32 US-08-807-374-2 Sequence 3, Appli 31 144 100.0 31 3 US-08-967-374-3 Sequence 2, Appli 31 144 100.0 31 3 US-08-967-374-3 Sequence 3, Appli 32 144 100.0 31 4 US-08-961-405A-1 Sequence 3, Appli 33 144 100.0 31 4 US-08-915-918A-1 Sequence 3, Appli 34 144 100.0 31 4 US-08-915-918A-1 Sequence 3, Appli 35 144 100.0 31 4 US-08-472-349-2 Sequence 3, Appli 36 144 100.0 31 4 US-08-472-349-2 Sequence 2, Appli 37 144 100.0 31 4 US-09-623-618B-27 Sequence 2, Appli 38 144 100.0 31 4 US-09-623-618B-27 Sequence 2, Appli 39 (144 100.0 31 4 US-09-623-618B-27 Sequence 27, Appli 39 (144 100.0 31 4 US-09-623-618B-27 Sequence 27, Appli 39 (144 100.0 31 4 US-09-623-618B-28 Sequence 27, Appli 40 (144 100.0 31 4 US-09-623-618B-28 Sequence 28, Appli 41 144 100.0 31 4 US-09-623-618B-28 Sequence 28, Appli 34 US-09-623-618B-28 Sequence 28, Appli 41 144 100.0 31 5 PCT-US95-15800-28 Sequence 28, Appli 41 144 100.0 31 5 PCT-US95-15800-30 Sequence 6, Appli 41 144 100.0 31 5 PCT-US95-15800-30 Sequence 6, Appli 41 144 100.0 31 5 PCT-US95-15800-30 Sequence 6, Appli 41 144 100.0 31 5 PCT-US95-15800-30 Sequence 6, Appli 41 144 100.0 31 5 PCT-US95-15800-30 Sequence 6, Appli 41 144 100.0 31 5 PCT-US95-15800-30 Sequence 6, Appli 41 144 100.0 31 5 PCT-US95-15800-30 Sequence 6, Appli 41 144 100.0 34 1 US-08-470-220A-6 Sequence 6, Appli 41 144 100.0 34 1 US-08-470-220A-6																		
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31 1 US-08-470-220A-3 Sequence 3, 31 2 US-08-807-263-3 Sequence 3, 31 3 US-08-967-374-2 Sequence 2, 31 3 US-08-967-374-3 Sequence 3, 31 4 US-08-967-405A-1 Sequence 1, 31 4 US-08-915-918A-1 Sequence 1, 31 4 US-09-302-596-3 Sequence 1, 31 4 US-09-623-618B-2 Sequence 2, 31 4 US-09-623-618B-27 Sequence 2, 31 4 US-09-623-618B-27 Sequence 2, 31 4 US-09-623-618B-27 Sequence 2, 31 4 US-09-623-618B-28 Sequence 3, 31 5 PCT-US95-15800-28 Sequence 3, 31 5 US-08-95-15800-28 Sequence 3, 31 5 US-08-95-15800-28 Sequence 3, 31 1 US-08-95-15800-5 Sequence 5, 34 1 US-08-470-220A-6 Sequence 6,																		
31 1 US-08-470-220A-3 Sequence 3, 31 2 US-08-967-374-2 Sequence 3, 31 3 US-08-967-374-2 Sequence 3, 31 3 US-08-967-374-3 Sequence 3, 31 4 US-08-967-405A-1 Sequence 3, 31 4 US-08-915-918A-1 Sequence 1, 31 4 US-08-915-918A-1 Sequence 1, 31 4 US-08-472-349-2 Sequence 2, 31 4 US-09-623-618B-27 Sequence 2, 31 4 US-09-623-618B-27 Sequence 2, 31 4 US-09-623-618B-27 Sequence 2, 31 4 US-09-623-618B-28 Sequence 27, 31 4 US-09-623-618B-28 Sequence 3, 31 5 PCT-US95-15800-28 Sequence 3, 31 1 US-08-95-15800-50 Sequence 6, 34 1 US-08-470-220A-6 Sequence 6,	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
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Sequence 3, Sequence 2, Sequence 3, Sequence 1, Sequence 1, Sequence 1, Sequence 2, Sequence 2, Sequence 27, Sequence 27, Sequence 27, Sequence 28, Sequence 3, Sequence 30, Sequence 6,	μ.	ш	u	տ	4	4	4	4	4	4	4	4	4	4	ω	ω	N	Ц
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Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli Appli					Sequence 3,			Sequence 17	Sequence 2,	Sequence 2,	Sequence 3,	Sequence 1,	Sequence 3,	Sequence 1,	Sequence 3,	Sequence 2,	Sequence 3,	Sequence 3,
), Appl	3, Appl	Appli	3, Appl	, Appl	, Appl	Appli	Appli	Appli	Appli	Appli	Appli	Appli	Appli	Appli	Appli

ALIGNMENTS

Sequence 4. Application US/08095162 PATENI NO. 5512459 PATENI NO. 5512459 PATENI NYORMATION: APPLICANT: Wagner, Fred W. APPLICANT: Stout, Jay APPLICANT: Wagner, Fred W. APPLICANT: Henriksen, Dennis APPLICANT: Partridge, Bruce APPLICANT: Manning, Shane TITLE OF INVENTION: Enzymatic Method for Modification of TITLE OF INVENTION: Recombinant Polypeptides NUMBER OF SEQUENCES: 26 CORRESPONDENCE ADDRESS: ADDRESSE: Merchant & Gould STREET: 3100 NO. 5512459west Center CITY: Minneapolis STATE: MN COUNTRY: USA TIP: 55402 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER READABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER READABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER READABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER READABLE FORM: MEDIUM TYPE: DATE: USA TIP: 55402 COMPUTER READABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER READABLE FORM: MEDIUM TYPE: DATE: USA TIP: 55402 COMPUTER READABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER READABLE FORM: MEDIUM TYPE: Ploppy disk COMPUTER SOURCE: LENGTH: 28 amino acids TYPE: APPLICATION INFORMATION: TELEPHONE: 612-332-9081 INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS: LENGTH: 28 amino acids TYPE: John acids TYPE:

100.0%;

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Score 144; DB 1; Pred. No. 9.4e-15; ; Mismatches 0;

Length 28; Indels

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Matches
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                                                        Sequence 4, Application US/08967374 Patent No. 6037143
                                                                                                                                                                                                                           Query Match
Best Local Similarity
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PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/095,162
APPLICATION: UNMBER: US 08/095,162
APPLICATION UNMBER: US 08/095,162
APPLICATION UNMBER: US 08/095,162
APPLICATION UNMBER: US 08/095,162
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                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Patentin Release #1.0/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Partridge, Bruce
APPLICANT: Manning, Shane
TITLE OF INVENTION: Enzymatic Method for Modification
TITLE OF INVENTION: Recombinant Polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 86
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                     IMMEDIATE SOURCE:
CLONE: GLP1 (7-34)
                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: 11
APPLICANT:
                             APPLICANT:
                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U:
ZIP: 55402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 06-JU
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                                                                                                                                                   HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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5. 5707826
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                                                                                                                                                                                                                                                                                                                                               amino acid
OGY: linear
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3100 No. 5707826west Center
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stout, Jay
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               Wagner, Fred W.
Stout, Jay
                                                                                                                                                                                                                Conservative
   Henriksen, Dennis
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06-JUN-1995
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Pred. No. 9
                                                                                                                                                                                                                  Mismatches
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ches 0;
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US-08-472-349-5
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                                                                                                                                                                                                                                                                                           sequence 5, Application US/08472349
Patent No. 6284727
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 29-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: CARTET, Charles G.
REGISTRATION NUMBER: 35,093
REFERENCE/DOCKET NUMBER: 8648
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/967,374
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MEDIUM TYPE: Floppy
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TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: pept
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LENGTH: 28 amino acids
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PRIOR APPLICATION NUMBER:
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                                                                                                                                                           APPLICANT: Geoghegan, Kieran F. APPLICANT: Danley, Dennis E. TITLE OF INVENTION: Prolonged D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IMMEDIATE SOURCE
                                                                                                                             NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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                                             COUNTRY: U.S.A.
                                                               STATE:
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                                                                                                                ADDRESSEE:
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3100 No. 6037143west Center
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                                                                                               235 East 42nd Street, 20th Floor
                                                                                                                                                                                                            Qi, Hong
Gelfand, Robert A.
                                                                                                                                                                                                                                                           Kim, Yesook
                                                                                                                                                                                                                                          Lambert, William J.
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                                                                                                                 Pfizer Inc
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OPERATING SYSTEM:

IBM PC compatible

PC-DOS/MS-DOS

Release #1.0, Version #1.25

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                                                                                                                                                                                          Sequence 21, Application PC/TUS9515800
GENERAL INFORMATION:
APPLICANT: BIONEDFASKA Inc.
TITLE OF INVENTION: PRODUCTION OF PEPTIDES USING
TITLE OF INVENTION: RECOMBINANT FUSION PROTEIN CONSTRICTS
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Sheyka, Robert F.
REGISTRATION NUMBER: 31,304
REFERENCE/DOCKET NUMBER: PC83
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)573-1189
TELEFAX: (212)573-1939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: N/A
INFORMATION FOR SEQ ID NO:
                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HYPOTHETICAL: NO ANTI-SENSE: NO FRAGMENT TYPE: N-terminal ORIGINAL SOURCE:
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PRIOR APPLICATION NUMBER: US/08/181,655
                                                                                                                                                           NUMBER OF SEQUENCES: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POSITION IN GENOME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
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COMPUTER: IBM CON OPERATING SYSTEM: SOFTWARE: FastSEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INDIVIDUAL ISOLATE:
HAPLOTYPE: N/A
CELL LINE: N/A
                                                                                        COUNTRY:
                                                                                                                     CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MAP POSITION: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 28 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LIBRARY:
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                                                                                                                                                   ADDRESSEE: Merchant & Gould
                                                                                                                                                                                                                                                                                                                                                     HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                             55402
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                                                                                                                                   3100 Norwest Center,
                                                                                        U.S.A.
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 FastSEQ Version 1.5
              IBM Compatible
SYSTEM: DOS
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                                                                                                                                    7th Street
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; ORIGINAL SOURCE:
PCT-US95-15800-21
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APPLICATION NUMBER: US/08/095
FILING DATE: 20-UUL-1993
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Nelson, Albin J.
REGISTRATION NUMBER: 28,659
REFERENCE/DOCKET NUMBER: 8648
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
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APPLICANT:
                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 612/332-5300
TELEPAX: 612/332-9081
                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 07-DEC-1994
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                       STREET: 3100 No. CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: UB/S
                                                                                                                                                                                                                                                            COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Carter, Charles REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/I
FILING DATE: 07-DEC-1995
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    Application US/08095162
5512459

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VENTION: Enzymatic Method for Modification of
VENTION: Recombinant Polypeptides
SEQUENCES: 26
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linear
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Stout, J
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Partridge, Bruce
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Pred. No. 9.4e-15;
Mismatches 0;
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; MOLECULE TYPE: peptide US-08-095-162-18
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Best Local Similarity
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                                                                                               Query Match
Best Local 9
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                                                                                  Matches
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                                                                                                                                                                                                                                                          TELEFAX: 612-332-9081 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Enzymatic Method for Modification TITLE OF INVENTION: Recombinant Polypeptides NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merchant & Gould STREET: 3100 No. 5707826west Center
                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 29 amino acids
                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 86
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 08/095,162
FILING DATE: 20-UUL-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Partridge APPLICANT: Manning,
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                                                                                                                                                                             MOLECULE TYPE: peptide
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ZIP: 55402
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                                                                                                                                                                                          TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                      NAME: Nelson, Albin J
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 06-JU
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                                    1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                  l Similarity
28; Conserv
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Partridge, Bruce
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llarity 100.0%;
Conservative (
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                                                                                                Score 144; DB 1; Pred. No. 9.8e-15;
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US-08-967-374-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 18, Application US/08967374 Patent No. 6037143
                                                                                                                                                        Patent No. 6284727
                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
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TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                           GENERAL INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/5:
FILING DATE: 29-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/967,374
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TELEPHONE: 612-332-5300
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ATTORNEY/AGENT INFORMATION:
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      APPLICANT: Gelfand, Robert A.
APPLICANT: Geoghegan, Kieran F.
APPLICANT: Danley, Dennis E.
TITLE OF INVENTION: Prolonged Delivery of Peptides
NUMBER OF SEQUENCES: 7
                                                                                       APPLICANT: Kim, Yesook
APPLICANT: Lambert, Wi
APPLICANT: Qi, Hong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
CORRESPONDENCE
                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 29 um-
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                                                                                                                                                                                                                                                                                                                  ch 100.0%; similarity 100.0%; 28; Conservative 0
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                                                                                                                                                                       Application US/08472349
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3100 No. 6037143west Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                            29 amino acids
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                                                                            Qi, Hong
Gelfand, Robert A.
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                                                                                                          Lambert, William J.
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                 peptide
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                                                                                                                                                                                                                                                                                                                      0;
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                                                                                                                                                                                                                                                                                                                      Score 144; DB 3;
Pred. No. 9.8e-15;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                  Length 29;
                                                                                                                                                                                                                                                                                                                       Indels
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ADDRESSEE:

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Sequence 6, Application US/08066480
Patent No. 5424286
GENERAL INFORMATION:
APPLICANT: Eng, John
TITLE OF INVENTION: Exendin-3 and
TITLE OF INVENTION: Exendin-3 and
UMBER OF SEQUENCES: 7
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CHROMOSOME/SEGMENT:
MAP POSITION: N/A
US-08-472-349-4
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Best Local 9
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REGISTRATION NUMBER: 31,304
REFERENCE/DOCKET NUMBER: PC83
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)573-1189
TELEFAX: (212)573-1939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: N/A
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                             CORRESPONDENCE ADDRESS:
Allegretti & Witcoff, Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL CONTENT OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: pe
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IMMEDIATE SOURCE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLONE:
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TYPE: amino acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN: N/A
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10 S. Wacker Drive
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235 East 42nd Street, 20th Floor
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                                                                                                                                           Pharmaceutical Compositions And Use of Exendin-3 and Exendin-4 for Treatment of Diabetes Mellitus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 144; DB 4; 100.0%; Pred. No. 9.8e-15;
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RESULT 11
US-08-095-162-1
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                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/095,162
FILING DATE: 20-JUL-1993
                                                                                                                            ZIP: 55402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-715-1000
                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Enzymatic Method for Modification TITLE OF INVENTION: Recombinant Polypeptides NUMBER OF SEQUENCES: 26
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NAME: McDonnell, John J
REGISTRATION NUMBER: 26,949
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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· CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
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OTHER INFORMATION:
                                                                                                                                                                       COUNTRY: U
ZIP: 55402
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3100 No. 5512459west Center
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Partridge, Bruce
Manning, Shane
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/note= "GLP-1(7-36) fragment"
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                                                                                                          INFORMATION FOR SEQ ID NO:
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REGISTRATION NUMBER: 28,659
REFERENCE/DOCKET NUMBER: 86
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMMEDIATE SOURCE: CLONE: GLP1 7-36-NH2 (Glucagon-like Peptide)
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                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 612-332-5300
                                                                                                                                                                                                          APPLICATION NUMBER: US 08/095,162
FILING DATE: 20-JUL-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, VICURENT APPLICATION DATA:
APPLICATION UMBER: US/08/470,220A
FILING DATE: 06-UN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Manning, TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                        SEQUENCE CHARACTERISTICS:
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                         MOLECULE TYPE:
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              IMMEDIATE
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                                                                                                                                                                     NAME: Nelson, Albin J. REGISTRATION NUMBER: 28, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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CITY: Minneapolis
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 GLP1
              SOURCE:
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3100 No. 5707826west Center
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Partridge, Bruce
                                                                                                                          612-332-9081
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                                             linear
7-36-NH2
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(Glucagon-like Peptide)
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Pred. No. le-14;
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; FEATURE:
; OTHER INFORMATION: The arginine residue at position 30 is modified so;
; OTHER INFORMATION: as to replace the terminal carboxyl group with an
; OTHER INFORMATION: amine.
US-08-927-227-1
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                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
US-08-967-374-1
                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, App.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn SEQ ID NO'1/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application Patent, No. 5977071
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Best Local Similarity
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/08/927,227A
CURRENT FILING DATE: 1997-09-10
NUMBER OF SEQ ID NOS: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Galloway, James A.
APPLICANT: Hoffmann, James A.
TITLE OF INVENTION: GLUCAGON-LIKE INSULINOTROPIC PEPTIDE ANALGOGS,
TITLE OF INVENTION: COMPOSITIONS AND METHODS
FILE.REFERENCE: X-9332B
                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                     APPLICANT: Wagner, Fred W.
APPLICANT: Stout, Jay
APPLICANT: Henriksen, Dennis
APPLICANT: Partridge, Bruce
APPLICANT: Manning, Shane
                                                                                                                                                                                                       TITLE OF INVENTION: Enzymatic Method for Modification TITLE OF INVENTION: Recombinant Polypeptides NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                CURRENT APPLICATION DATA:
                        COMPOTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Palant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 3100 NO. CITY: Minneapolis
 APPLICATION NUMBER:
                                                                                                                         COUNTRY:
                                                                                                                                               STATE:
                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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3100 No. 6037143west Center
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                            PatentIn Release #1.0, Version #1.30
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Pred. No. 1e-14;
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Pred. No. 1e-14;
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FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION UNMBER: 08/520,485
PILING DATE: 29-AUG-1995
APPLICATION NUMBER: 08/520,485
PILING DATE: 29-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: Carter, Charles G.
REGISTRATION NUMBER: 35,093
REFERENCE/DOCKET NUMBER: 8648.32-USD1
FELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARRACTERISTICS:
LENGTH: 450 amino acids
TYPE: amino acid
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
INMEDIATE SOURCE:
CLONE: GLP1 7-36-NH2 (Glucagon-like Peptide)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09348136
Patent NO. 6133235
GENERAL INFORMATION:
APPLICANT: Galloway, James A.
APPLICANT: Hoffmann, James A.
APPLICANT: Hoffmann, James A.
TITLE OF INVENTION: GLUCAGON-LIKE INSULINOTROPIC PEPTIDE ANALGOGS,
TITLE OF INVENTION: COMPOSITIONS AND METHODS
FILE REFERENCE: X-9332B
                                                                                    Query Match 100.0%; Score 144; DB 4; Best Local Similarity 100.0%; Pred. No. 1e-14; Matches 28; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 08/927,227
PRIOR FILING DATE: 1997-09-10
NUMBER OF SEQ ID NOS: 1
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 30A
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 144; DB 3; Length 30; Best Local Similarity 100.0%; Pred. No. 1e-14; Matches 28; Conservative 0; Mismatches 0; Indels
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CURRENT FILING DATE: 1999-07-06
                                                                                                                                                                                                                                  OTHER INFORMATION: The arginine residue at position 30 is modified so OTHER INFORMATION: as to replace the terminal carboxyl group with an OTHER INFORMATION: amine.
                                                                                                                                                                                                                                                                                                     ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                    Length 30;
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Search completed: July 30, 2002, 08:45:52 Job time: 163 sec

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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
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91.7
891.7
79.2
79.2
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sp_vertebrate:*
sp_unclassified:*
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sp_bacteria:*
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sp_mhc:*
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Q951g0 canis famil
Q991410 gallus gall
O12956 heloderma s
O42143 xenopus lae
Q91409 oncorhynchu
Q91971 oncorhynchu
Q919871 oncorhynchu
Q91189 oncorhynchu
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Q91189 oncorhynchu
Q91189 oncorhynchu
Q91189 oncorhynchu
Q91140 xenopus lae
Q9purl petromyzon
Q9dde6 brachydanio
Q9prw9 scyliorhinu
Q9dg43 ambloplites
Q9pur0 petromyzon
Q9cvf1 mus musculu
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Q9d887 mus musculu
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Sandry byrococcus	QSS884 Synechocyst	Q38545 bacteriopha	Q9fgy5 arabidopsis	Q9prn8 carassius a	Q9n5b8 caenorhabdi	Q9n5b7 caenorhabdi	Q9hee5 neurospora	Q9n5b9 caenorhabdi	Q9bij4 caenorhabdi	Q966f0 caenorhabdi	P97770 mus musculu	Q99m45 mus musculu		Q98tu3 brachydanio	O18301 caenorhabdi	Q98sp6 anas platyr	Q9xfw9 cicer ariet	Q9ufx9 homo sapien	Q9ntw8 homo sapien	caenorhabdi		oncorhyn			Q9de29 brachydanio	P71006 bacillus su	7 mus	Q96qk3 homo sapien

ALIGNMENTS

RESULT 2: Q91410 ID Q91410 AC Q91410; DT 01-NOV-1996 (Tremblrel. 01, Created) DT 01-NOV-1996 (Tremblrel. 01, Last sequence update) DT 01-DEC-2001 (Tremblrel. 19, Last annotation update) DE PROGLUCAGON.	Query Match 100.0%; Score 144; DB 6; Length 180; Best Local Similarity 100.0%; Pred. No. 4.2e-14; Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Oy 1:HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28 Qy 1:HAEGTFTSDVSSYLEGQAAKEFIAWLVK 125	Q95LG0 Q95LG0 PRELIMINARY; PRT; 180 AA. AC Q95LG0; DT 01-DEC-2001 (TrEMBLrel. 19, Created) DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update) DT 01-DEC-2001 (TrEMBLrel. 19, Last annotation update) DT 01-DEC-2001 (TrEMBLrel. 19, Last annotation update) DT 01-DEC-2001 (TrEMBLrel. 19, Last annotation update) DC Canis familiaris (Dog). OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis. OC NCEI_TaxID-9615; RN [1] RP SEQUENCE FROM N.A. RA Irwin D.M.; RT "CDNA; Cloning of proglucagon from the stomach and pancreas of the dog."; RT "CDNA; Cloning of proglucagon from the stomach and pancreas of the SEQUENCE (SEP-2000) to the EMBL/GenBank/DDBJ databases. DR EMBL; AF308439; AAL09425.1; - SEQUENCE 180 AA; 21114 MW; 80F66941AFC324FD CRC64;

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                                                                                                                TILISUE-Specific expression of unique mRNAs that encode proglucagon-
RT derived peptides or exendin 4 in the lizard.";
RI J. Biol. Chem. 272:4108-4115(1997).

10. Biol. Chem. 272:4108-4115(1997).

21. BIOCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC -1- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC -1- FINCOD SUGAR LEVEL (BY SIMILARITY).
CC -1- ALTERNATIVE PRODUCTS: 2 ISOFORMS; LPII (SHOWN HERE) AND LPI; ARE
CC PRODUCED BY ALTERNATIVE SPLICING.
CC -1- TISSUE SPECIFICITY: ISOFORM LPII IS EXPRESSED IN BOTH PANCREAS AND
CC PRODUCED BY ALTERNATIVE SPLICING.
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLEED TO THE
CC PANCREAS. NEITHER ISOFORM IS DETECTED IN SALIVARY GLAND.
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLEED OF LANGERHANS IN
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.

PREMBL: U77611; AAB51129.1; -

NR EMBL: U77611; AAB51129.1; -

NR HASEP; PO1274; IGCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., ALTERNATIVE S
TISSUE-INTESTINE, AND PANCREAS;
MEDLINE-97172477; PubMed-9020121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUL-1997 (TrEMBLrel. 04, 01-JUL-1997 (TrEMBLrel. 04, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00260; GLUCAGON; 3. SEQUENCE 206 AA; 23875 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MO1. Endocrinol. 9:267-277
EMBL; S78477; AAB34506.1;
HSSP; P01274; IGCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transcripts encoding glucagon-like Mol. Endocrinol. 9:267-277(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-95295739; PubMed-7776976; Irwin D.M., Wong J.;
                            SMART; SM00070; GLUCA; 3.
PROSITE; PS00260; GLUCAGON;
Glucagon family; Hormone; Cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Heloderma suspectum (Gila monster).
Eukaryota; Metazoa; Chordata; Craniata;
Lepidosauria; Squamata; Scleroglossa; Ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLUCAGON PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              012956; 012955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 012956
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000532; Glucagon
Pfam; PF00123; hormone2; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
                                                                          Pfam; PF00123; hormone2; PRINTS; PR00275; GLUCAGO
                                                                                                                                                                                                                                                                                                                                                                    Chen Y.E., Drucker D.J.;
                                                                                                         InterPro; IPR000532; Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=8554;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and chicken proglucagon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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                  splicing
                                                                          GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                                               ALTERNATIVE SPLICING,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91.7%;
88.9%;
                               Cleavage
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Last sequence update)
Last annotation update
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Pred. No. 3.4e-12;
3; Mismatches 0;
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                               pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a; Vertebratā;
Anguimorpha;
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                                  basic residues;
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Helodermatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                    SPECIFICITY
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                                 Signal;
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HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28

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042143;
01-JAN-1998
01-JAN-1998
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VARSPLIC
SEQUENCE
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Xenopus laevis (African clawed frog).

Xenopus laevis (African clawed frog).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                           PEPTIDE
VARSPLIC
SEQUENCE
                                                                                                                                                                       PEPTIDE
PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=97368292; PubMed=9223287;
                                                                                                                                                                                                                                                                     Glucagon
                                                                                                                                                                                                                                                                                                                                         Pfam; PF00123; hormone2; 5.
                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF004432; AAF
HSSP; P01274; 1GCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        insulinotropic properties.",
Proc. Natl. Acad. Sci. U.S.A. 94:7
Proc. NOCTION: PROMOTES HYDROLYSIS
THE BLOOD SUGAR LEVEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-PANCREAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116
                                                                                                                                                      PEPTIDE
                                                                                                                                                                                                                                               Multigene
                                                                                                                                                                                                                                                                                    PROSITE; PS00260; GLUCAGON;
                                                                                                                                                                                                                                                                                                          SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                   - I - SIMILARITY: BELONGS TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "The Xenopus proglucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Irwin D.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=8355;
                                                                                                                                                                                                                                SIGNA
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Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALTERNATIVE PRODUCTS:
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23; Conser
                                                                                                                                                                                                                                                                                                        SM00070;
                                                                                                                                                                                                                                                                                                                         PR00275; GLUCAGON.
                                                                                                                                                                                                                                                                     famil
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97
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227
214
266
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(TrEMBLrel. 05, Last sequence update)
(TrEMBLrel. 17, Last annotation update)
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                                                                                                                                                                                                                                                                   Signal; Cleavage on
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GRPP (GLICENTINE RELATED POLYPEPTIDE).

GLUCAGON.

GLUCAGON-LIKE PEPTIDE 1.

GLUCAGON-LIKE PEPTIDE 2.

D >> E (IN ISOFORM LPI).

MISSING (IN ISOFORM LPI).

MISSING (IN ISOFORM LPI).
                                                                                                                                                                                                                                                                                                                                                                                                                   THE GLUCAGON
                                                                                             GLUCAGON.

GLUCAGON-LIKE PEPTIDE 11
GLUCAGON-LIKE PEPTIDE 11
GLUCAGON-LIKE PEPTIDE 12
GLUCAGON-LIKE PEPTIDE 2
GLUCAGON-LIKE PEPTIDE 2
MISSING (IN ISOFORM 2).
MISSING (IN ISOFORM 2).
 Score 114; DE Pred. No. 2.76
7; Mismatches
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Pred.
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YSIS OF GLYCOGEN AND
                                                                                                                                                                                                                                                 splicing.
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                     e 114; DB 13;
No. 2.7e-09;
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No.
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.8e-11;
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                                                                                                                                                                                                                                                                     pair of basic residues
                                                                                                 CRC64;
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                                      Length
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                                                                                                                                1A
1B
1C
2.
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Best Local
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01-NOV-1996
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Irwin D.M., Wong J.;
"Trout and chicken proglucagon: alternative transcripts encoding glucagon-like peptide Mol. Endocrinol. 9:267-277(1995).
EMBL; S78474; AAD14283.1; -.
EMBL; U19920; AAC59670.1; -.
HSSP; P01274; IGCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oncorhynchus tschawytscha (Chinook salmon) (King salmon) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute. Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynces (CEL_TaxID-74940;
         Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eukarthopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorh
                                                                                                                                                                                                                                                                                                                                                                                                  091971; 091408; 091188; 092169;
01-NOV-1996 (TIEMBLIEL 01, Created)
01-NOV-1996 (TIEMBLIEL 01, Last sequence update)
01-JUN-2001 (TIEMBLIEL 17, Last annotation updat
                                                                                                                                        "Trout and chicken proglucagon: alternative transcripts encoding glucagon-like peptide Mol. Endocrinol. 9:267-277(1995).
                                                                                                                                                                                                              SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING TISSUE=DISTAL SMALL INTESTINE, AND PANCREAS; MEDLINE=95295739; PubMed=7776976;
                                                                                                                                                                                                                                                                                                                                                                                     GLUCAGON I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q91971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000532; Glucagon. Pfam; PF00123; hormone2; 2. PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE=95295739; PubMed=7776976;
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                                                                                                                                                                                                 Irwin D.M., Wong J.;
                                                                                                                                                                                                                                                                                          NCBI_TaxID=8022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 HAEGTFTSDVSSYLEGQAAKEFIAWL 26
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69.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8584352B1C260A31 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
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                                                                                                                                                                              alternative splicing
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                                                                                       (SHOWN HERE)
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                                                                                                                                                                                                                                                                                                                                               Euteleostomi;
                                                     OF LANGERHANS
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                                                                                                                         RAISES
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PART OF STREET O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMALL
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Q91189 PRELIMINARY;
Q91189; Q92188;
01-NOV-1996 (TrEMBLrel. 01, C1
01-NOV-1996 (TrEMBLrel. 17, La
01-JUN-2001 (TrEMBLrel. 17, La
GLUCAGON II PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U19918; AAC60212.1; --
EMBL; U19919; AAC60213.1; --
EMBL; U19919; AAC60213.1; JOINEL
EMBL; S78475; AAB34505.1; --
EMBL; S78475; AAB34504.2; --
EMBL; S78473; AAB34504.2; --
INTERPRO; IPRO00532; Glucagon.
                                                                                              -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.

EMBL; U19914; AACC5968.1; -.

EMBL; U19915; AACC60210.1; -.

EMBL; U19915; AACC60210.1; JOINED.

EMBL; U19915; AACC60209.1; -.

HSSP; D91274; IGCN.

InterPro; IPRO00532; Glucagon.

Pfam; PF001232; hormone2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Ekartinopterygii; Neopterygii; Teleostai; Büteleostai; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorh NCEI_TaxID-8022;
                                                                                                                                                                                                                                                                                         transcripts encoding glucagon-like peptide 2.";
Mol. Endocrinol. 9:267-277(1995).
-i- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND
-THE BLOOD SUGAR LEVEL (BY SIMILARITY).
-i- ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL
                                                             PRINTS; PRO0275; GLUCAGON. SMART; SM00070; GLUCA; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00123; hormone2; 3
PRINTS; PR00275; GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                "Trwin D.M., Wong J.;
"Trout and chicken proglucagon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00260; GLUCAGON; 3.
Glucagon family; Hormone; Cleavage on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PRO0275; GLUCA(
SMART; SMO0070; GLUCA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alternative splicing; Multigene family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90 HADGTYTSDVSTYLQDQAAKDEVSWL 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HAEGTFTSDVSSYLEGQAAKEFIAWL 26
                                                                                                                                                                                                                                                          PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS
                                                                                                                                                                                                                                         RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION
         PS00260; GLUCAGON; UNKNOWN_2.
family; Hormone; Cleavage on |
family; Multigene family
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AAC60212.1;
AAC60213.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAC60213.1; JOINED.
AAB34505.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=7776976;
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80
120
169
178
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
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Pred. No. 9.66
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
MISSING (IN PANCREATIC ISOFORM).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
GRPP (GLICENTINE
GLUCAGON.
POTENTIAL
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.6e-09;
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                                of basic residues;
                                                                                                                                                                                                                                                                                                                                                                   splicing 2.";
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                                                                                                                                                                                                                                                                                            (SHOWN HERE) AND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
                                                                                                                                                                                                                                                            OF.
                                                                                                                                                                                                                                                                                                                                                                                 generates
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Best Loc
Matches
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Best Local Similarity 69.7
Matches 18; Conservative
                                                                                                                                                                                                                                                                                        PEPTIDE
SEQUENCE
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01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JAN-1998 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
GLUCAGON II PRECURSOR [CONTAINS: GLUCAGON; GLUCAGON-LIKE PEPTIDE 1A
(GLP-1A); GLUCAGON-LIKE PEPTIDE 1B (GLP-1B); GLUCAGON-LIKE PEPTIDE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     042144;
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PEPTIDE
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VARSPLIC
SEQUENCE
                   Q9PUR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -1- SIMILARITY: BELONGS TO EMBL; AF004433; AAB65661.1; HSSP; P01274; 1GCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "The Xenopus proglucagon gene encodes novel GLP-1%like insulinotropic properties."; Proc. Natl. Acad. Sci. U.S.A. 94:7915-7920(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Amphibia; Batrachia; Anura; Mxenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                 PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00260; GLUCAGON; Glucagon family; Hormone; S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Irwin D.M., Satkunarajah M., Wen
Wheeler M.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-97368292; PubMed-9223287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                              PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000532; Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GLP-1C)]
                                                                                                                   180
                                                                                                                                                                                                                Local
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                                                                                                                                     1 HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
                                                                                                                                                                                                                                  Match
                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: PROMOTES HYDROLYSIS THE BLOOD SUGAR LEVEL.
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HADGTYTSDVSTYLQDQAAKDFVSWL
                                                                                                                   HAEGTETNDMTNYLEEKAAKEFVGWLI
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sm00070; GLUCA; 4.
                                                                                                                                                                                            18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       family.
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97
142
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                     PRELIMINARY;
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69.2%;
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Anura; Mesobatrachia; Pipoidēa;
                                                                                                                                                                                                            75.78;
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GLUCAGON-LIKE PEPTIDE 2.
GLUCAGON-LIKE PEPTIDE 2.
MISSING (IN PANCREATIC ISOFORM).
PAGN73866CD91C66 @RC64;
                                                                                                                                                                                                                                                                                                                                                                                                                       Signal; Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 109;
Pred. No. 9.
7; Mismatche
                                                                                                                                                                                                                                                                                      POTENTIAL.
GLUCAGON-LIKE PEPTIDE 11
GLUCAGON-LIKE PEPTIDE 11
GLUCAGON-LIKE PEPTIDE 12
GLUCAGON-LIKE PEPTIDE 12
ACC699233C362CEO CRC66
                                                                                                                                                                                            Pred. No. 1.2
7; Mismatches
                                                                                                                                                                                                                Score 109;
Pred. No. 1
                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLUCAGON FAMILY
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                                                                                                                   206
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLYCOGEN AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brubaker P.L.,
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                       160
                                                                                                                                                                                      DB 13,
1.2e-08;
2;
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1.6e-09;
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1B
1C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pipidae;
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RESULT
Q9DDE6
ID Q9
DT Q9
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DT 01
DT 01
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DT 01
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GN GC
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Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                   Q9DDE6;
Q9DDE6;
Q1-MAR-2001
01-MAR-2001
01-DEC-2001
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O1-MAY-2000 (TIEMBLEE1. 13, Created)
O1-MAY-2000 (TIEMBLEE1. 13, Last sequence update)
O1-DEC-2001 (TIEMBLEE1. 19, Last annotation update)
GLUCAGON I PRECURSOR (CONTAINS: GLUCAGON; GLUCAGON-LIKE PEPTIDE (GLP-1); GLUCAGON-LIKE PEPTIDE (GLP-2)].
Petromyzon marinus (Sea lamprey).
Eukaryota; Metazoa; Chordata; Cianiata; Vertebrata; Hyperoartia;
                                                                                                                       Brachydanio rerio (Zebrafish) (Zebra dan Eukaryota; Metazoa; Chordata; Craniata; Actinopterygii; Neopterygii; Teleostei; Cypriniformes; Cyprinidae; Danio. NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEPTIDE
PEPTIDE
PEPTIDE
SEQUENCE
Argenton
"Early ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conlon J.M., Nielsen P.F., Youson J. "Primary structures of glucagon and from the intestine of the parasitic
                                                                                                                                                                                                                                                                                 GLUCAGON
                                                                                                                                                                                                                                                          GCG OR GLU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00260; GLUCAGON; Glucagon family; Hormone; S:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00123; hormone2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF159707; AAF09186.1; HSSP; P01275; 1BH0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               marinus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=94010172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 43-71 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=20022986; PubMed=10555286; Irwin D.M., Huner O., Youson J.H.; "Lamprey proglucagon and the origin Mol. Biol. Evol. 16:1548-1557(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -1 - SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-INTESTINE;
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                                                    MEDLINE=99425190; PubMed=10495291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82
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FUNCTION: PROMOTES HY
THE BLOOD SUGAR LEVEL
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15; Conserv
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     appearance
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2001 (TrEMBLrel. 16, 1
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N POLYPROTEIN.
                       F.,
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71
113
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  E., Bortolussi M.;
pancreatic hormone-expressing
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HYDROLYSIS OF GI
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GLUCAGON.LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
GLUCAGON-LIKE PETIDE 2.
WW; 9A52C53OD5A74O72 CRC64;
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Pred. No. 1e-07;
1; Mismatches
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phase lamprey
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ta; Vertebrata;
ei; Euteleostei;
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Petromyzon
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     cells
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Best Local S
Matches 19
                                                                                                         Query Match
Best Local Similarity
Matches 15; Conser
                                                                                                                                                                                                                                                                                                                    Glucagon
PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                      NON_CONS
PEPTIDE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conlon J.M., Hazon N., Thim L.;

"Primary structures of peptides derived from proglucagon isolated the pancreas of the elasmobranch fish, Scyliorhinus canicula.";

Peptides 15:163-167(1994).

-1- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scyllorhinus canicula (Spotted dogfish) (Bukaryota; Metazoa; Chordata; Craniata; VElasmobranchii; Galeomorphii; Galeoidea; Scyllorhinidae; Scyllorhinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
GLUCAGON PRECURSOR [CONTAINS: GLUCAGON-29; GLUCAGON-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Interpro; IPR000532; Glucagón. Pfam; PF00123; hormone2; 2. PRINTS; PR0275; GLUCAGON. SMART; SM00070; GLUCA; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mech. Dev. 87:217-221(1999).
EMBL; AJ133697; CAC20108.1;
HSSP; P01274; IGCN.
ZFIN; ZDB-GENE-010219-1; gcg.
                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00275; GLUCA; SMART; SM00070; GLUCA; PR0SITE; PS00260; GLUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-94286411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                zebrafish embryo.";
Mech. Dev. 87:217-221(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THE BLOOD SUGAR LEVEL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9PRW9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9PRW9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
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                                 HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
HSEGTFTSDYSKYMDNRRAKDFVQWLM 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P01274; 1GCN.
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19; Conser
                                                                                                                                                                                                                                                                                           n family; Hormone.
1 29
1 33
3 34
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Q9PRX0; Q9PRW8;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPRO00532; Glucagon.
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                                                                                                         Conservative
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88
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                                                                                                                                                                                                                                                                                                                                                                                                  GLUCAGON;
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13537
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                                                                                                                                Score 95;
Pred. No.
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Pred.
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GLUCAGON-LIKE PEPTIDE 1.
; A85385F690DA180F CRC64;
                                                                                                                                                                                                                                      GLUCAGON-LIKE PEPTIDE C5FF487C12C69CD1 CRC6
                                                                                                                                                                                                                                                                                                                    GLUCAGON-29.
GLUCAGON-33.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLUCAGON FAMILY.
                                                                                                         Mismatches
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3e-07;
                                                                                                                                                           DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Spotted catshark).
Vertebrata; Chondrichthyes;
Carcharhiniformes;
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                                                                                                                                                         Length 62
                                                                                                      Indels
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AC Q9DG4
AC Q9DG1
D7 Q9
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Q9PURO
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Query Match
Best Local S
Matches 14
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Submitted (SEP-1999) to the EMBI
EMBL; AF190499; AAG16778.1; -.
HSSP; P01274; IGCN.
InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 2.
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Q9DG43;
Q9DG43;
01-MAR-2001
01-MAR-2001
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NON_TER
SECUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
                                                                                                                     SEQUENCE FROM N.A.
TISSUB=INTESTINE;
MEDLINE=20022986; PubMed=10555286;
Irwin D.M., Huner O., Youson J.H.;
"Lamprey proglucagon and the origin of glucagon-like peptides.";
Mol. Biol. Evol. 16:1548-1557(1999).
                                                                                                                                                                                                                                                                    GLUCAGON II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Cr
Actinopterygii; Neopterygii; Tel
Acanthomorpha; Acanthopterygii;
Centrarchidae; Ambloplites.
                                                         -!- SIMILARITY: BELONGS TO EMBL; AF159708; AAF09187.1; HSSP; P01275; 1BH0.
                                                                                                                                                                                                                    Eukaryota; Metazoa;
Petromyzontiformes;
                                                                                                                                                                                                                                                                                01-MAY-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                  Q9PURO;
          PRINTS; PR00275; GLUCA; SMART; SM00070; GLUCA;
                                  InterPro; IPR000532; Glucagon. Pfam; PF00123; hormone2; 2.
                                                                                                                                                                                                                                            Petromyzon marinus (Sea lamprey).
                                                                                                                                                                                                                                                                                                        01-MAY-2000
                                                                                                                                                                                                                                                                                                                                Q9PURO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROGLUCAGON
                                                                                                                                                                                                        NCBI_TaxID=7757;
                                                                                                                                                                                                                                                       (GLP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS00260; GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Al-Mahrouki A.A., Irwin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=109273;
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                                                                                                                                                                                                                                                                                                                                                                                                                   1 HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
                                                                                              FUNCTION: PROMOTES HYDROLYSIS THE BLOOD SUGAR LEVEL.
                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                  (TIEMBLIEL. 13, Created)
(TIEMBLIEL. 13, Last sequence update)
(TIEMBLIEL. 19, Last annotation update)
PRECURSOR [CONTAINS: GLUCAGON; GLUCAGON-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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96 39 1
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                       GLUCAGON.
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>70
>96
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                                                                                                                                                                                                                    Chordata; Craniata;
Petromyzontidae; Pet
                                                                                                                                                                                                                                                                                                                                                                                                                                                       61.1%;
51.9%;
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16,
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                                                                                 THE GLUCAGON FAMILY
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Last annotation updat
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GLUCAGON-LIKE I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 88; DB
Pred. No. 7.7e
9; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Craniata;
Teleostei;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Youson J.H.;
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                                                                                                          GLYCOGEN AND
                                                                                                                                                                                                                    Petromyzon.
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                                                                                                                                                                                                                                Vertebrata;
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Euteleostei; Neoteleostei;
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PS00260;

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RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adaghi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishii K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukowa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Battalov S., Casavant T.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schrimi L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schrimi L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Frunno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storich K.-F.,
RA Sasaki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Haynshizaki Y., Soshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Haynshizaki Y., Storich K.-F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 13; Conser
                                                                                                                                                              Matches
                                                                                                                                                                                                   Query Match
Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001
01-JUN-2001
01-DEC-2001
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Mus musculus (Mouse).
Chordata; Metazoa; Chordata; Motazoa; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hayashizaki Y.;
"Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
EMBL; AK008525; BAB25720.1; -.
HSSP; P01274; IGCN.
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STRAIN-C57BL/6J; TISSUE-SMALL INTESTINE;
MEDLINE-2108566J; PubMed-11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00123; hormone2; SMART; SM00070; GLUCA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGD; MGI:107504; Gip.
InterPro; IPR000532; Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00260; GLUCAGON; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44
30 YAEGTFISDYSIAMDKIRQQDFVNWLL 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
                                                                                                                                                                                               Local
                                                                          1 HAEGTFTSDVSSYLEGOAAKEFIAWLV 27
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                                                                                                                                                         l Similarity 40.
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89
120 AA;
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72
120
13397 .
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48.1%;
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17, Last sequence update)
19, Last annotation update)
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Pred. No. 0.
7; Mismatche
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Pred.
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GLUCAGON-LIKE PEPTIDE.
; FBDE667B96E198D8 CRC64;
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Sciurognathi; Muriĝae; Murinae; Mus
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5.9e-05;
                                                                                                                                                                                                                                        DB 11; Length 130;
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                                                                            Matches
                                                                                              Query Match
Best Local Similarity
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Mammalia; Eutheria; I
NCBI_TaxID=10090;
[1]
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Q9D887;
Q9D887;
Q1-JUN-2001
Q1-JUN-2001
Q1-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=SMALL INTESTINE;
MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TREMBLrel. 17, Created)
01-JUN-2001 (TREMBLrel. 17, Last seq
01-DEC-2001 (TREMBLRel. 19, Last ann
GASTRIC INHIBITORY POLYPEPTIDE.
                                                                                                                                                                     SMART; SM00070; GLUCA; 1.
PROSITE; PS00260; GLUCAGON; 1
SEQUENCE 144 AA; 16389 MW;
                                                                                                                                                                                                                                                                                                                             "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                Pfam; PF00123; hormone2; SMART; SM00070; GLUCA; 1
                                                                                                                                                                                                                                                                                        EMBL; AK008308; BAE
HSSP; P01274; IGCN.
                                                                                                                                                                                                                                                  InterPro; IPR000532; Glucagon
                                                                                                                                                                                                                                                                      MGD; MGI:107504; Gip.
                                                                                                                                                                                                                                                                                                                                                                   Hayasnizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                     Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S
44 YAEGTFISDYSIAMDKIRQQDFVNWLL 70
                      1 HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
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                                                                            Conservative
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                                                                                              41.08;
                                                                        Score 59; D
Pred. No. 0.
7; Mismatche
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Last annotation update)
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                                                                              Mismatches
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

OM protein - protein search, using sw model

Run on: July 30, 2002, 08:46:19; Search time 10.32 Seconds (without alignments) 105.053 Million cell updates/sec

Title: Perfect score: US-09-508-083-1 144

HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28

Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

105224 seqs, 38719550 residues

Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

SwissProt_40:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Matches 28; Conser
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PROSITE;
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Mammalia; Eutheria;
Bovidae; Bovinae; Bc
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21-JUL-1986
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InterPro; IPR000532;
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                                                                                                                          Bromer W.W., Boucher M.E., Koffenberger "Amino acid sequence of bovine glucagon. J. Biol. Chem. 246:2822-2827(1971).
                                                                                                                                                                                                                                                 "Mammalian pancreatic
                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE-83299996;
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                                                                                                                                                                                        SEQUENCE OF 53-81
                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9913;
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16-OCT-2001
                                                                                                                                                                        MEDLINE=71166445; PubMed=5102927;
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SIGHT OF THE BLOOD SUGAR LEVEL.

FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF CALLS

FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF CALLS

FUNCTION: GLUCAGON PROMOTES INTESTINAL GROWTH AND UPREGULATES FUNCTION: GLUCAGON CALLS INTESTINE, CONCOMITANT WITH INCREASED CR

CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.

CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 HAEGTETSDVSSYLEGQAAKEFIAWLVK
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(Rel. 05, Last sequence update)
(Rel. 40, Last annotation update)
1 (Rel. 40, Last annotation related polypeptide (GRPP);
recursor [Contains: Glicentin-related polypeptide 2
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er M.L., Su C.-J., P
atic preproglucagon
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GLICENTIN.RELATED POLYPEPTIDE.
GLUCAGON.
GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
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Pred. No. 5.7
); Mismatches
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three glucagon-related
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                                   GLUCAGON
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SEQUENCE FROM N.A.
MEDILINE-86248118; PubMed=3755107;
MEDIATOR Melsh M., Bell G.I., Chan S.J., St
"Mutations in the guinea pig preproglucagon
specific portion of the prohormone sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                 16-CCT-2001 (Rel. 40), Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-37 (Oxyntomodulin); Glucagon-like peptide 1 (GLP
Glicagon-like peptide 2 (GLP2)].
                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Mammalia; Eutheria; NCBI_TaxID=10141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; K00107; AAA30538.1; PIR; A01538; GCBO. HSSP; P01274; 1GCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between the Swiss Institute of Bioinformatiche European Bioinformatics Institute. They use by non-profit institutions as long a modified and this statement is not removed.
             Conlon J.M., Hansen H.F., Schwartz "Primary structure of glucagon and oxyntomodulin (glucagon 37) from the Regul. Pept. 11:309-320(1985).
                                                                                                                                                                                                                                                                                                                                                                    Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata;
                                                                            MEDLINE=86017849;
                                                                                                                                                                           SEQUENCE OF 53-81 MEDLINE=86165412;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
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28; Conservative
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glucagon differs
:508-512(1986).
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Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                     Hystricognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
 HYDROLYSIS
                               tz T.
                                                                                                                                           Hulmes
m other
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                                                                Σ
                               guinea
                                            partial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pair of basic residues;
                                                                                                                                           J.D., Yalo
mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            There are no rest
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s 0;
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GLYCOGEN
                                                                                                                                                            Yalow
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                         are restricted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                             glucagons.";
                                                                                                                                                                                                                                                                        D.F.;
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                                                                                                                                                              R.S.;
                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
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                                                of.
 AND
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 LIPIDS,
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RESULT 4
GLUC_HUMAN
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Best Local S
Matches 28
                                                                                                                               SEQUENCE FROM N.A.
MEDLINE-88330860; PubMed=2901414;
Drucker D.J., Asa S.;
                                                                                                                                                                                                                                                                                                                  GLUC_HU
P01275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                       MEDLINE-86259053; Put
White J.W., Saunders
                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
SEQUENCE FROM TISSUE-Liver;
                                                                                                                                                                                                                                                                   Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A24856;
                                  Nucleic
                                               "Structure of
                                                                                   SEQUENCE
                                                                                                                      "Glucagon
                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                         Glucagon;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ptam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000532;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; D00014; BAA00010.1; -.
                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                              21-JUL-1986 (Rel.
13-AUG-1987 (Rel.
16-OCT-2001 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                            98
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                          Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VII HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT CELL PROLIFERATION AND DECREASED ENTERCYTE APOPTOSIS. INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.

SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                          HAEGTFTSDVSSYLEGQAAKEFIAWLVK 125
                                                                                                                                                                                                                                                                                                                                                                                                        HAEGTFTSDVSSYLEGQAAKEFIAWLVK
                                                                                                                                                                                                                                                                                                                                HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P01274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SM00070; GLUCA;
                                   Acids
                                                                                 FROM
                                                                                                         n gene
Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PS00260;
                                                                                                                                                                                                                                                         Glucagon-like
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92
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                                  Res.
                                   Res. 14:4719-4730(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A.
                                                                                                         expression in vertebrate brain.";
263:13475-13478(1988).
                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hormone; Cleavage on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLUCAGON.
                                                                                                                                                                                                                                                                              01,
05,
                                                                       PubMed=3725587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLUCAGON;
                                                                                                                                                                                          Chordata;
Primates;
                                                                                                                                                                                                                                                      55, Last sequence update)
40, Last annotation update)
(Contains: Glicentin-related polypeptide (GRPP);
(Contains: Glicentin-related polypeptide 2
-like peptide 1 (GLP1); Glucagon-like peptide 2
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50
81
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178
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20972
                                                           G.F.
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GLUCAGON. 37.
GLUCAGON-17.
GLUCAGON-LIKE PEPTIDE 1
GLUCAGON-LIKE PEPTIDE 2
W; 702FB181161D2776 CRC6
                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                            Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 144; DB 1;
Pred. No. 6.6e-14;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                               180
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IDE 2.
CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 180;
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                                                                                                                                                                                                        Euteleostomi;
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EMBL; J04040; AAA52567.1
EMBL; X03991; CAA27627.1
EMBL; Y01515; CAA24759.1
PIR; A24377; GCHU.
PIR; S23309; S23309.
                                                        SIGNAL
PEPTIDE
PEPTIDE
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FEBS
                               PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bridges in glucagon biological activity.";
J. Med. Chem. 41:2693-2700(1998).
-!-- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sturm N.S., Lin Y., Burle
Azizeh B.Y., Trivedi D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Orskov C., Bersani M., Johnsen A.H., "Complete sequences of glucagon-like small intestine.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-83271477; PubMed-6877358; Bell G.I., Sanchez-Pescador R., I "Exon duplication and divergence
     SEQUENCE
                   CONFLICT
                                                                                                               Glucagon
                                                                                                                                       PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 3.
                                                                                                                                                                   Pfam; PF00123; hormone2;
                                                                                                                                                                                             MIM; 138030;
MIM; 231530;
                                                                                                                                                                                                                                                                                                                                                                                                    This
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Structure-function studies on positions 17, 18, analogues of glucagon: the importance of charged
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thomsen
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                                                                                                 Pharmaceutical;
                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=98334683;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X-RAY CRYSTALLOGRAPHY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 98-127.
MEDLINE-89327238; PubMed-2753890;
                                                                                                                                                                                nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION. PHARMACEUTICAL: Available under the names Glucagon Glucagen or Glucagon Novo Nordisk (Novo Nordisk). U severe hypoglycemia in insulin-dependent diabetics. SIMILARITY: BELONGS TO THE GLUCAGON FAMILY. DATABASE: NAME-Glucagon at Eli Lilly:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RAISES THE BLOOD SUGAR LEVEL.
FÜNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                           NOTE-Clinical information on Eli Lilly glucagon products; WWW-"http://www.lillyDiabetes.com/Products/PatientInfo.cfm".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sen J., Kristiansen K.,
amino acid sequence of
Lett. 21:315-319(1972).
                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                        1BH0; 18-NOV-98
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                                                                                                            family; Hormone; Cleavage on
                                                                                                                          PS00260;
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                                                                                                                                                                            IPR000532; Glucagon
82
180
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146
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; CAA27627.1; -.
; CAA24759.1; -.
     A,
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                                                                                              3D-structure.
                                                                                                                            GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PubMed=9667960;
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178
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20909
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               GLICENTIN-RELATED POLYF
GLUCAGON-LIKE PEPTIDE 1
GLUCAGON-LIKE PEPTIDE 2
GLUCAGON-LIKE PEPTIDE 2
K -> N (IN REF. 3).
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     7A99EEC629B2862C
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e in the human p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Krstenansky J.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hoejrup P., Holst J.J.;
peptide-1 from human and
                                                                                                            pair
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                                                                                                               of basic residues;
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                                                                        POLYPEPTIDE
       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and 21 replacement residues and salt
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Query Match
Best Local Similarity
Matches 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity Matches 28; Conserv
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MEDLINE-83167563; PubMed-6835407;

Bell G.I., Santerre R.F., Mullenbach G.T.;

Bell G.I., Santerre R.F., Mullenbach G.T.;
                                                                     PEPTIDE
PEPTIDE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-JUL-1986 (Rel. 01, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                  entities requires a license agreement (Se or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (XXX-1985)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bell G.I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REVISIONS TO 12-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Hamster preproglucagon contains related peptides."; nature 302:716-718(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mesocricetus
                                                                                                                                                          Glucagon
                                                                                                                                                                                                                 InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 3.
                                                                                                                                                                                                                                                          PIR; A01539; GCHY.
                                                                                                                                                                                                                                                                         EMBL; J00059; AAA37074.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GLP2)].
                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98
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RAISES THE BLOOD SUGAR LEVEL.

FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS FUNCTION: GLP2 STIMULATES. CONCOMITANT WITH INCREASED CRYPT
                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO THE GLUCAGON FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOS INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENURATION.
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                                                                                                                                                                                      SM00070;
                                                                                                                                                                                                     PR00275;
                                                                                                                                                          family;
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                                                                                                                                                                                     GLUCA;
                                                                                                                                                                                                   GLUCAGON.
                                                                                                                                                         Hormone;
                                                                                                                                                                         GLUCAGON; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Golden hamster).
Chordata; Craniata; Veri
Rodentia; Sciurognathi;
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                100.0%;
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                                                                     GLICENTIN-RELATED PORYPEPTIDE GLUCAGON.
GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
; 02791B49D7AADD4B CRC64;
                Score 144; DB 1;
Pred. No. 6.6e-14;
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thi; Muridae;
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                           Length 180;
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Cricetinae;
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RESULT
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p55095;
p15095;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-MR-2002 (Rel. 41, Last annotation update)
01-MR-2002 (Rel. 41, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP):
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rothenberg M.E., Eilertson C.D., Klein K., Zhou McDonald J.K., MacKin R.B., Noe B.D.; McConsign of mouse proglucagon by recombinant 1 and immunopurified prohormone convertase 2 in J. Biol. Chem. 270:10136-10146(1995).
                                                                                                                                                                                                                 Glucagon
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Pancreatic islets;
MEDLINE=95247722; PubMed=7730317;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; Z46845; CAA86902.1; -. EMBL; AF276754; AAK96898.1;
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Pfam; PF00123; hormone2; 3.
                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P01274; 1GCN.
MGD; MGI:95674; GCg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -I- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS. INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF {\it Li}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HAEGTFTSDVSSYLEGQAAKEFIAWLVK
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    Similarity
                                                                                                                                                                                                                                                                                                               PR00275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               non-profit institutions as long and this statement is not removed.
                                                                                                                                                                                                                                                                PS00260;
                                                                                                                                                                                                                                          family;
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                                                                                                                                                                                                                                                                                      GLUCA;
                                                                                             Hormone;
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178
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                                                                                                                                                                                                                                                                                                               GLUCAGON.
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                license agreement (See http://www.isb-sib.ch/announce/
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GLICENTIN-RELATED P

GLUCAGON.

GLUCAGON-LIKE PEPTI

GLUCAGON-LIKE PEPTI
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Score 144; DB 1;
Pred. No. 6.6e-14;
                                                                                                  595AA6DD9A589950
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                                                                                             IDE 1.
IDE 2.
CRC64;
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vitro.";
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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - Mol.
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01-AUG-1991 (Rel.
16-OCT-2001 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P22890;
01-AUG-1991
                                                                                                                                                                                        Glucagon
                                                                                                                                                                                                            PRINTS; PR00275; GLUCA; SMART; SM00070; GLUCA;
                                                                                                                                                                                                                                                        PIR; C36118; GCRTDU.
HSSP; P01274; 1GCN.
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Mammalia; Eutheria;
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                                                                                                                                                                      SIGNAL
                                                                                                                                                                                                                                    Pfam; PF00123; hormone2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Cloning of complementary DNAs encoding insulin, and glucagon precursors from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nishi M., Steiner D.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-91155952;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glucagon; Glucagon-like
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SIMILARITY: BELONGS TO THE GLUCAGON PAMILY.
                                                                                                                                                                                                                                                                                                                                                European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EUNCTION: GLUCAGON PROMOTES HYDROLYSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                RAISES THE BLOOD SUGAR LEVEL.
FUNCTION: GLP2 STIMULATES INTESTINAL
HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                      Similarity
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J91 (Rel. 19, Last sequence update)

001 (Rel. 40, Last annotation update)

precursor [Contains: Glicentin-related polypeptide (GRPP);

precurson-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                         family;
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Rodentia;
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GLUCAGON-LIKE PEPT
                                                                                                 GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
AMIDATION (G-128 PROVIDE
6E8836160A9A3051 CRC64;
                                          Score 144; DB 1;
Pred. No. 6.6e-14;
Mismatches 0;
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New World rode
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                                                                                                                                                                                         basic residues;
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                                                                                                                                                         POLYPEPTIDE
                                                              Length 180;
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                                                                                                                                                                                                                                                                                                                                                            EMBL outstation
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RESULT 8
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EMBL; K02809; AAA4123
EMBL; K02810; AAA4123
EMBL; K02811; AAA4123
EMBL; K02812; AAA4123
EMBL; K02812; GCRT.
PIR; AA2655; GCRT.
PIR; A44198; A44198.
HSSP; P01274; 1GCN.
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01-JAN-1988
16-OCT-2001
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J. Biol.
-!- FUNC
                                       Glucagon
SIGNAL
                                                              PRINTS; PR00275; GLUCAK
SMART; SM00070; GLUCA;
PROSITE; PS00260; GLUCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid sequences of the rat pa
decxyribonucleic acid.";
Endocrinology 115:2176-2181(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. Biol. [2] .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.

MEDLINE-85054853; PubMed-6094539;
Heinrich G., Gros P., Habener J.F.;

"Glucagon gene sequence. Four of six exons
domains of rat pre-proglucagon.";
J. Biol. Chem. 259:14082-14087(1984).
                                                                                                                                                                                                                                                    entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                 use by non-profit institutions as long modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE-86304324;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Glucagon precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                          "Preproglucagon gene expression in pancreas at the level of post-translational process!
J. Biol. Chem. 261:11880-11889(1986)
-i- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS
RAISES THE BLOOD SUGAR LEVEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

MEDLINE=85051023; PubMed=6548696;

Heinrich G., Gros P., Lund P.K., Bentley R.C.,

"Pre-proglucagon messenger ribonucleic acid: nu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLUC_RAT
                                                                                                        InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 3.
                                                                                                                                                                                                                                                                                                                         between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mojsov S., Heinrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Habener J.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLP2)].
                                                                                                                                                                                                                                                                                                           European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                     HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCICELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSI INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF
                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH
                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                             IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION
                                                                                                                                                                                                                                                                                                                       SWISS-PROT entry is copyright. It is produced through en the Swiss Institute of Bioinformatics and the EN
n family; Hormone; (1) 20 1 50 51 50 53 81 92 128
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88 (Rel. 06, Last sequence update)
01 (Rel. 40, Last annotation update)
precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                     AAA41235.1;
AAA41235.1;
AAA41235.1;
                                                                                                                                                                        AAA41235.1;
AAA41235.1;
                                                                                                                                                                                                                             AAA41235.1;
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                                                                                            GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=3528148;
                                                                 GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the rat pancreatic complementary
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JOINED.
JOINED.
JOINED.
                                                   Cleavage on
                           GLICENTIN-RELATED
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pancreas and intestine diversifies
processing.";
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; Murinae; Rat
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RESULT 9
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Best Local S
Matches 28
                                                                                                                                                                                  Immunology.";
Horm. Metab. Res. 4:360-363(1972).
Horm. Metab. Res. 4:360-363(1972).

-i- EUNCTION: PROMOTES HYDROLYSIS OF GLYCOGE
THE BLOOD SUGAR LEVEL.
-i- INDUCTION: PRODUCED IN THE A CELLS OF TH
IN RESPONSE TO A DROP IN BLOOD SUGAR CON
-i- MISCELLANEOUS: THE COMPOSITION OF TURKEY
IDENTICAL WITH CHICKEN
-i- MISCELLANEOUS: CHICKEN PREPROGLUCAGON DO
GLUCAGON-LIKE PEPTIDE II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-1986
01-AUG-1990
15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gallus gallus (Chicken), and Meleagris gallopavo (Common turkey).

Meleagris gallopavo (Common turkey).

Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLUC_CHICK P01277;
                                                  This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for conentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                             SPECIES-M.gallopavo;
MEDLINE-73074118; PubMed-4645932;
Markussen J., Frandsen E.K., Heding L.G.,
"Turkey glucagon: crystallization, amino a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA. Chicken
II.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPECIES-Chicken; TISSUE-Pancreas; MEDLINE-90249492; PubMed-2338135; Hasegawa S., Terazono K., Nata K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Glucagon
                         EMBL; Y07539; CAA68827.1;
                                                                                                                                                                                                                                                                                                                                                                                      COMPOSITION, AND SEQUENCE OF 55-83
                                                                                                                                                                                                                                                                                                                                                                                                                   "Chicken glucagon. Isolation and amino J. Biol. Chem. 250:9377-9380(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=76069271; PubMed=1194290; Pollock H.G., Kimmel J.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 55-83.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEBS Lett.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Nucleotide sequence determination of chicken cDNA. Chicken preproglucagon does not contain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Okamoto H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID-9031,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity 100 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   precursor
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180 AA;
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(Rel. 15, Last sequence update)
(Rel. 38, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               preproglucagon
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20846 MW;
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                                                                                                                                                                      TO THE GLUCAGON FAMILY.
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; 76931409D03C7978 CR@64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 144; DB 1;
Pred. No. 6.6e-14;
Mismatches 0;
                                                                                                                                                                                                                                                                                      OF GLYCOGEN AND LIPIDS, AND RAISES
                                                                                                                                                                                                                            ELLS OF THE ISLETS OF LANGERHANS SUGAR CONCENTRATION.
OF TURKEY GLUCAGON APPEARS TO B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Takada T.,
                                                                                                                                                                                                                                                                                                                                amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                  acid sequence studies.";
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                                                                                                                                                                                                                                                                                                                                              Sundby
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glucagon-like peptide
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-: SIMILARITY: BELONGS T

PIR: B61125; B61125.

PIR: C61125; C61125.

HSSP; P01275; 1BHO.
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MOD_RES
SEQUENCE
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PEPTIDE
PROPEP
                                                                                                                                                                                     Glucagon family; Amidation.
MOD_RES 30 30
SEQUENCE 30 AA; 3376 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIINE-91340068; PubMed-1874385;
Conlon J.M., Andrews P.C., Thim L., Moon T.W.;
Conlon J.M., Andrews P.C., Thim L., Moon T.W.;
"The primary structure of glucagon-like peptide but not insulin been conserved between the American eel, Anguilla rostrata and t European eel, Anguilla anguilla.";
Gen. Comp. Endocrinol. 82:23-32(1991).

-i. SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                       PRINTS; PR00275; GLUCAGO SMART; SM00070; GLUCA; 1
                                                                                                                                                                                                                                                                                             InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 1.
PRINTS; PR00275; GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=7936,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00260; GLUCAGON; 3. Glucagon family; Hormone; Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00070;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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HAEGTYTSDITSYLEGQAAKEFIAWLV 144
                                                                                                 Similarity
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                                                                                                     . 98;
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Teleostei; Anguilliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 132; DB 1;
Pred. No. 3.1e-12;
3; Mismatches 0;
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AMIDATION (G-148 PROVIDE
B6C0D87536C0AEB5 CRC64;
                                                                                                       Score 118; DB 1; Pred. No. 6.4e-11;
                                                                                                                                                                                         AMIDATION.
592DA5EABD6E49D0 CRC64;
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                                                                                    Mismatches
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RESULT
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PEPTIDE
SEQUENCE
                                                                                                 01-NOV-1986 (Rel. 03, Created)
01-NOV-1986 (Rel. 03, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon II precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon II, Glucagon-like peptide II]
Lophius americanus (American goosefish) (Anglerfish).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Acanthomorpha; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Lophiiformes; Lophius.
                                                                                                                                                                                                                             GLU2_LO
P04092;
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PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00123; hormone2; 3
PRINTS; PR00275; GLUCAGON.
SMART; SM00070; GLUCA; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POLIOCK H.G., Hamilton J.W., Rouse J.B., Ebner K.E., Rawitch A.B.; "Isolation of peptide hormones from the pancreas of the bullfrog (Rana catesbeiana). Amino acid sequences of pancreatic polypeptide, oxyntomodulin, and two glucagon-like peptides."; J. Biol. Chem. 263:9746-9751(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLUC_RANCA STANDARD; PRT; 103 AA P15438; P15439; P15440; 01-APR-1990 (Rel. 14, Created) 01-JUL-1993 (Rel. 26, Last sequence update) 01-JUL-1993 (Rel. 26, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RANCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION OTHER SPECIES SEQUENCES.

-I- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>:</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Pancreas;
                                                                    SEQUENCE FROM
                                                                                                                                                                                                                                                       LOPAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; P01274; 1GCN.
InterPro; IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-88257102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Glucagon precursor (Fragments).
 "Anglerfish islet pre-proglucagon I
"Anglerfish islet pre-proglucagon I
amino acid sequence of the cDNA.";
J. Biol. Chem. 258:3280-3284(1983).
                                                     SEQUENCE FROM N.A. MEDLINE=83135785; PubMed=6338015;
                                                                                            NCBI_TaxID=8073;
                                                                                                                                                                                                                                                                                                           39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THE BLOOD SUGAR LEVEL.
INDUCTION: PRODUCED IN THE A CELLS
                                                                                                                                                                                                                                         _LOPAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    в28091; ссгсв.
                                                                                                                                                                                                                                                                                                          HADGTFTSDMSSYLEEKAAKEFVDWLIK
                                                                                                                                                                                                                                                                                                                      HAEGTFTSDVSSYLEGQAAKEFIAWLVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                       n family; Hormone.
1 29
1 36
1 36
39 70
5 70 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS00260;
                                                                                                                                                                                                                                                                                                                                                                                                                                103
                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                              Ą,
                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=3260236;
                                                                                                                                                                                                                                                                                                                                                                                                                                11719
                                                                                                                                                                                                                                                                                                                                                                          81.9%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                              MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
                                                                                                                                                                                                                                                                                                                                                            5;
                                                                                                                                                                                                                                                                                                                                                            Score 118; DB Pred. No. 2.3e 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              GLUCAGON-LIKE PEPT:
316287B7BAE1C8F7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLUCAGON.
GLUCAGON-36 (OXYNTOMODULIN).
GLUCAGON-LIKE PEPTIDE 1.
                                                                                                                                                                                                                                          PRT;
                           M.R.,
                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                          66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ELLS OF THE ISLETS OF SUGAR CONCENTRATION
                                                                                                                                                                                                                                          122
                            Nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
                                         Dee P.C., Habener J.F.;
                                                                                                                                                                                                                                                                                                                                                                          DB 1;
.3e-10;
                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                             PEPTIDE 2.
1C8F7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                     Length 103;
                            and
                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q.
                           corresponding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HOMOLOGY WITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LANGERHANS
                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rana.
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                            0;
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                                                                                                                                                                                                                                                                                                                      GLUC_
                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 77.8
Best Local Similarity 73.3
Matches 19; Conservative
                                                                                                                                                                                                                                                                                         GLUC_ICTPU
P04093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEPTIDE
PROPEP
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collat between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Noe B.D., Andrews P.C.;
"Specific glucagon-related peptides isolated from anglerfish are metabolic cleavage products of (pre)proglucagon-II.";
Peptides 7:331-339(1986).
-I- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
                                                                                                                                                                                                                                      01-MAR-1989 (Rel. 10, Last seq
01-NOY-1990 (Rel. 16, Last ann
Glucagon precursor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Glucagon
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [2]
PROCESSING.
                                                                                                                                                                                   Ictalirus punctatus (Channel catfish).
Eukaryota; Metazoa; Chordata; Craniata;
Actinopterygii; Neopterygii; Teleostei;
Siluriformes; Ictaluridae; Ictalurus.
                                                                                                                                                                                                                                                                                                                      ICTPU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SECUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; V00632; CAA23905.1; -. PIR; A05150; GCAF2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=86286913; PubMed=3526301;
                                                                                                                                                                                                                                                                              01-NOV-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PRO0275; GLUCAC SMART; SM00070; GLUCA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; A05150; GCAF2.
HSSP; P01274; 1GCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
MEDLINE=85157536;
Andrews P.C., Roni
                                                                                          MEDLINE-87156787; PubMed-3030323;
Hoosein N.M., Mahrenholz A.M., Andrews P.C.,
"Biological activities of catfish glucagon a
                           TISSUE=Pancreas;
                                                                                                                                  TISSUE=Pancreas;
                                                                                                                                                SEQUENCE
                                                                                                                                                                        NCBI_TaxID=7998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00123; hormone2;
                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nterPro;
                                                                 iochem.
                                                                                                                                                                                                                                                                                                                                                                         89
                                                                                                                                                                                                                                                                                                                                                                                      1 HAEGTFTSDVSSYLEGQAAKEFIAWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENSIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INDUCTION: PRODUCED IN THE A CELLS OF IN RESPONSE TO A DROP IN BLOOD SUGAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: PROMOTES HYDROLYSIS THE BLOOD SUGAR LEVEL.
                                                                                                                                                                                                                                                                                                                                                                          HADGTYTSDVSSYLQDQAAKDFVSWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        n family; Hormone; (
1 21 21 49 22 80 83 86 83 86 89 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100070; bluch,
PS00260; GLUCAGON; 2.
                                                                Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1
22
52
83
89
122 AA;
                                                                                                                                                                                                                                                   (Rel. 03, Created)
(Rel. 10, Last sequence up
(Rel. 16, Last annotation
                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLUCAGON.
                                                                 Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14171
                                                                                                                                                                                                                                                                                                                                                                                                                                         77.8%;
73.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW.
                                                                                                                                                                                                                                                                                                                                                                                                                             6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLUCAGON-LIKE PEPTIDE; 5140AC47EF915519 CRC
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 112; DB 1
Pred. No. 2e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLUCAGON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLICENTIN-RELATED
                                                                   143:87-92(1987).
                                                                                                                                                                                                                                                                                                                                                                          114
                                                                                                                                                                                                                                                                                                                                                                                                   26
                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                            glucagon and
                                                                                                                                                                                                                                                                   update)
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                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                          71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OF THE ISLETS
                                                                                                                                                                                                   Vertebrata; Euteleostomi;
Euteleostei; Ostariophysi
                                                                                                                                                                                                                                                                                                          Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONCENTRATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of basic residues;
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Length 122; Indels

CRC64;

POLYPEPTIDE

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Gaps

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Gurd R.

Ostariophysi;

glucagon-like

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RESULT
GLUC_LI
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용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IN RESPONSE TO A DROP IN BLOOD SUGAR CON-I- MISCELLANEOUS: X'S IN THE SEQUENCE WERE AMERICAN GOOSEFISH SEQUENCES.
I- SIMILARITY: BELONGS TO THE GLUCAGON FAMER A05166; GCIDC.
HSSP; P01274. 177.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEPTIDE
PEPTIDE
CONFLICT
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE;
Glucagon
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Isolation and structures of glucagon and glucagon-like peptide from catfish pancreas.";
J. Biol. Chem. 260:3910-3914(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glucagon; Glucagon-36 (Oxynto Glucagon-1ke peptide) (Fragment).
Lepisosteus spatula (Alligator gar) (Atractosteus spatula)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE BLOOD SUGAR LEVEL.
-I- INDUCTION: PRODUCED IN
IN RESPONSE TO A DROP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLUC_LEPSP
P09566;
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                                                                                                                                                             Pollock H.G., Kimmel J.R., Hamilton J.W., R
Lance V., Rawitch A.B.;
"Isolation and structures of alligator gar
                                                                                                                                                                                                                              PRELIMINARY SEQUENCE OF 1-29.
TISSUE-Pancreas;
MEDLIND-88030594; PubMed-3311873;
                                                                                                                                                                                                                                                                                                                                        oxyntomodulin, and coxyntomodulin and c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LEPSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                    "Isolation of alligator gar (Lepisosteus spatula) oxyntomodulin, and glucagon-like peptide: amino a oxyntomodulin and glucagon-like peptide."; Gen. Comp. Endocrinol. 69:133-140(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-36
TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                         Lance V
                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-88196798; PubMed-3282974;
Pollock H.G., Kimmel J.R., Ebner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=7917;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Actinopterygii;
                                        Insulin and pancreatic polypeptide.";

Jen. Comp. Endocrinol. 67:373-382(1987).

JIPIC FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIC THE BLOOD SUGAR LEVEL.

JIPIC THE BLOOD SUGAR LEVEL.

IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lepisosteus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38 HADGTYTSDVSSYLQEQAAKDFITWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HAEGTFTSDVSSYLEGQAAKEFIAWL
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                 IN RESPONSE TO A DROP IN BLOOD SUGAR CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SM00070; GLUCA;
                                                                                                                                                                                                                                                                                                                                                                                                         H.G., Kimmel J
,, Rawitch A.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   family; Hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS00260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000532; Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38
53
71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260:3910-3914(1985)
PROMOTES HYDROLYSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neopterygii;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND 45-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLUCAGON; 2
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71
71
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76.98;
                                                                                                                                                                                                                                                                                                                                                                                                                             J.R.,
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GLUCAGON-LIKE PEPTIDE.
E -> D (IN REF. 2).
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Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Semionotiformes;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLUCAGON FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                               K.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δį.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78
                                                                                                                                                                                                                                                                                                                                                                                                                               Hamilton J.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
.6e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F THE ISLETS OF LANGERHANS CONCENTRATION.
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                                                                                                                                                                                                                Rouse J
                                                                                                                                                                                                                                                                                                                                                                 amino ac
                                                                                                                                                                    (Lepisosteus
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                      INCLUDED
                                                                                                        AND LIPIDS, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lepisosteidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                               glucagon,
cid sequen
                                                                                                                                                                                                            €
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Rouse
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                                                              LANGERHANS
                                                                                                                                                                      spatula)
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                                                                                                                                           SQUETE TERM REPRESENTATION OF THE STREET OF 
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Matches | 19; Conservative
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                                                                                                                                        NON_TER
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Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi
Characiformes; Characidae; Serrasalminae; Piaractus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLUC_PIAME STANDARD; PRT; P81880; 30-MAY-2000 (Rel. 39, Created) 30-MAY-2000 (Rel. 39, Last sequence up 30-MAY-2000 (Rel. 39, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glucagon precursor (Fragment)
Piaractus mesopotamicus (Pacu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR: SIMILARITY: BELONGS TO PIR: S06339; GCGXA HSSP; P01274; 1GCN.
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                                                                                                                                                                                                                                                                                     Pfam; PF00123; hormone2; 2 PRINTS; PR00275; GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                                                                  PROSITE;
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                                                                                                                                                                                                                                   Glucagon
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71
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one2; 2.
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GLUCAGON-36.
GLUCAGON-LIKE PEPTIDE.
30106496271594E0 CRC64;
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Pred. No. 2.
                                                                                                                                               F66A3CA2DD9806C5 CRC64
                                                                      Score 109;
Pred. No. 3
                                                                                                                                                                                 GLUCAGON.
GLUCAGON-LIKE PEPTIDE
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HADGTYTSDVSAYLQDQAAKDFITWL

Search completed: July 30, 2002, 08:49:23 Job time: 184 sec

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Title:
Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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144
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Gapop 10.0 , Gapext 0.5
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pir1:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

29	2 2	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	σ	υī	4	ω	2	1	NO.	Result
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glucagon-36 - spot	exendin-3 - Mexica	exendin-4 - Gila m	glucagon - bowfin	glucagon - bigeye	glucagon · Europea	glucagon - Chinchi	glucagon Gl - Nort	glucagon I - Europ	glucagon - slider	glucagon - ostrich	glucagon - duck	glucagon-69 - dog	glucagon G2 - Nort	glucagon - common	glucagon - Arabian

ALIGNMENTS

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A; Molecule type: protein
A; Residues: 98-127 <ORS>
A; Rribomsen, J; Kristiansen, K; Brunfeldt, K; Sundby, F.
FBBS Lett. 21, 315-319, 1972
A; Title: The amino acid sequence of human glucagon.
A; Reference number: A91373
A; Accession: A01541
A; Molecule type: protein
A; Residues: 53-81 <THO>
A; Rrisugita, A; Takamoto, K; Kamo, M; Iwadate, H.
Eur. J. Biochem. 206, 691-696, 1992
A; Title: C-terminal sequencing of protein. A novel partial acid hydrolysis and analysis
A; Reference number: S23188; MUID:92298996
A; Accession: S23309
A; Molecule type: protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-180 cDDV
A; Cross-references: GB.J04040; NID:g183269; pIDN:AAA52567.1; pID:g183270
A; Cross-references: GB.J04040; NID:g183269; pIDN:AAA52567.1; pID:g183270
R; Orskov, C.; Bersani, M.; Johnsen, A.H.; Hojrup, P.; Holst, J.J.
J. Biol. Chem. 264, 12826-12829; 1989
A; Tille: Complete sequences of g10:2390; peptide-1 from human and pid.
A; Reference number: A92732; MUID:89327238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R; White, J.W.; Saunders, G.F.
Nucleic Acids Res. 14, 4719-4730, 1986
A; Title: Structure of the human glucagon gene.
A; Reference number: A24377; MUID: 86259053
A; Accession: A24377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R:Bell, G.I.; Sanchez Pescador, R.; Laybourn Nature 304, 368-371, 1983
A;Title: Exon duplication and divergence in A;Reference number: A44197; MUID:83271477
A;Accession: A44197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                glucagon precursor [validated] - human
N;Contains: glicentin; glicentin-related polypeptide (GRPP); glucagon; glucagon-like
ke peptide 1 (tGLP1)
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  A;Cross-references: GDB:119265;
A;Map position: 2q36-2q37
                                                                                                                                                 stinal L cells,
                                                                                                                                                                                                    A; Molecule type: protein A; Residues: 53-81 <TSU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biol. Chem. 263, 13475-13478, 1988
A;Tille: Glucagon gene expression in vertebrate brain
A;Reference number: A30875; MUID:88330860
A;Accession: A30875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:V01515; NID:g31777; PIDN:CAA24759.1; PID:g31778
R;Drucker, D.J.; Asa, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-179 <BEL>
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A; Residues: 1-180 <WHI>
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                                                                                                                                              ;Comment: In pancreatic alpha-cells, proglucagon is processed to glicentin-related pol
tinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Date: 24-Apr-1984 #sequence_revision 31-Mar-1993 #t@xt_change 08-Dec-2000 Accession: A24377; A44197; A30875; A32614; A01541; $23309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Species: Homo sapiens (man)
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Matches

HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28

0

Indels

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Gaps

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F;126-158/Product: glucagon-like peptide 2 *status experimental <GL2> F;107/Modified site: amidated carboxyl end (Arg) (am@de in mature form from following
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C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; carbohydrate metabolism;
F;1-20/Domain: signal sequence #status predicted corresponding to the correspo
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F:21-180/Product: glicentin #status experimental <GLN>
F:21-50/Product: glicentin related polypeptide #status predicted <GRPP>
F:21-50/Product: glicentin-related polypeptide #status predicted <GRPP>
F:53-80/Product: oxyntomodulin #status experimental <OXN>
F:53-81/Product: glucagon #status experimental <GCN>
F:92-178/Product: glucagon-like peptide 1 #status experimental <GLP>
F:92-179/Product: glucagon-like peptide 1 #status experimental <GLP>
F:98-127/Product: truncated glucagon-like peptide 1 #status experimental <TGL>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
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FEBS Lett. 203, 25-30, 1986
A;Title: Myltations in the guinea pig preproglucagon gene are restricted to a specific A;Reference number: A24856; MUID:86248118
A;Accession: A24886
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Superfamily: glucagon
C;Reywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone;
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-180/Product: proglucagon #status predicted <PGC>
F;21-190/Region: glicentin-related peptide #status predicted
F;31-90/Region: glicentin-related peptide #status predicted
F;53-89/Product: glucagon-37 (oxyntomodulin) #status experimental <G37>
F;53-81/Product: glucagon #status experimental <GCN>
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A;Title: Primary structure of glucagon and a A;Reference number: A60323; MUID:86017849
A;Accession: A60323
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein A; Residues: 53-81 < CON>
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A; Residues: 1-180 <SEI>
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Pred. No. 1.3e-13;
); Mismatches 0;
Score 144; DB 1;
Pred. No. 1.3e-13;
Mismatches 0;
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                                                                                                                             Length 180;
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C;Species: Octodon ueywa vury-,
C;Date: 31-Mar-1993 #sequence_revision
C;Accession: C36118
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A;Note: the authors translated the codon TTG for residue R;Mojsov, S; Heinrich, G; Wilson, I.B.; Ravazzola, M.;
J. Blol. Chem. 261, 11880-11889, 1986
A;Title: Preproglucagon gene expression in pancreas and ja, Reference number: A25190; MUID:86304324
A;Raccession: A25190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; Heinrich, G.; Gros, P
J. Biol. Chem. 259, 140
A; Title: Glucagon gene
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C;Date: 30-Sep-1987 #sequence_revision 30
C;Accession: A22655; A25190; A44198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      glucagon precursor - rat
N;Contains: glicentin-related peptide; glucagon; glucagon-like peptide 1; glucagon-like
C;Species: Rattus norvegicus (Norway rat)
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A;Title: Cloning of complementary DNAs encoding
A;Reference number: A36118; MUID:91155952
A;Accession: C36118
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                                 A; Molecule type: mRNA
A; Residues: 1-180 <HE
                                                                                                                             A;Title: Pre-proglucagon messenger ribonucleic acid: A;Reference number: A44198; MUID:85051023 A;Accession: A44198
                                                                                                                                                                                                                            A; Residues: 1-180 < MOJ> R; Heinrich, G.; Gros, P Endocrinology 115, 2176
                                                                                                                                                                                                                                                                                                                           A;Status: not compared with conceptual translation A;Molecule type: mRNA
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A; Residues: 1-180 <NIS>
   A; Cross-references: GB: K02809;
                                                                                               A; Status: preliminary
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28; Conser
                              1-180 <HE2>
                                                                                                                                                                                                                                Gros, P.; Lund, P.
15, 2176-2181, 1984
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259, 14082-14087, 1984
on gene sequence: four o
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1192-1198, 1990
1192-1198 DNAS
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   GB:K02810;
                                                                                                                                                                                                                                                           P.K.; Bentley, R.C.;
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Pred. No. 1.3e-13;
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GB:K02811;
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                                                                                                                                                                                                                                                              J.F.
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A;Introns: 31/2; 85/2; 131/2; 1/2/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; carbohydrate metabolism; duplicat
F;1-20/Domain: signal sequence #status predicted <SGS>
F;21-180/Product: proglucagon #status predicted <PGC>
F;21-50/Region: glicentin-related peptide #status predicted
F;3-81/Product: glucagon #status predicted <GCN>
F;98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F;146-180/Product: glucagon-like peptide 2 #status predicted <GL2>
F;146-180/Product: glucagon-like peptide 2 #status predicted <GL2>
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R;Bell, G.I.; Santerre, n...,
Nature 302, 716-718, 1983
A;Title: Hamster preproglucagon contains the sequence and the sequence of the sequence o
                                                                                                                                                                           R;Lopez, L.C.; Frazier, M.L.; Su, C.J.; Kumar, A.; Saunders, Proc. Natl. Acad. Sci. U.S.A. 80, 5485-5489, 1983
A;Title: Mammalian pancreatic preproglucagon contains three A;Reference number: A93970; MUID:83299996
A;Accession: A93970
                                                                                                                                                                                                                                                                                                                               N;Contains: glicentin-related peptide; glucagon; glucagon-like p C;Speckes: Bos primigenius taurus (cattle) C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change C;Accession: A93970; A92081; A01538 R;Lopez, L.C.; Frazier, M.L.; Su, C.J.; Kumar, A.; Saunders, G.F. R;Lopez, L.C.; Frazier, M.L.; Su, C.J.; Kumar, A.; Saunders, G.F. R;Lopez, L.C.; Frazier, M.L.; Su, C.J.; Kumar, A.;
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A; Residues: 1-180 <LOP>
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A; Residues: 1-180 <BEL>
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                                                               A; Cross-references: EMBL: K00107
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Boucher, M.E.;
246, 2822-2827,
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ilarity 100.
Conservative
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Pred. No. 1.3e-13;
Mismatches 0;
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Pred. No. 1.3e-13;
; Mismatches 0;
                                                                                                                                                                                                                                                               contains three glucagon-related
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) (amide in ma+...
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C; Superfamily: glucagon
C; Superfamily: glucagon
C; Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; panc
C; Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; panc
F; 1-20/Domain: signal sequence *status predicted <PGC>
F; 21-180/Product: proglucagon *status peptide *status predicted
F; 21-50/Region: glicentin-related peptide *status predicted
F; 38-81/Product: glicagon *status experimental <GCN>
F; 88-127/Product: glicagon-like peptide 1 *status experimental <GLI>
F; 146-178/Product: glicagon-like peptide 2 *status predicted <GLI>
F; 146-178/Product: glicagon +status predicted <GLI>
F; 146-178
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C;Date: 01-Dec-1995 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
C;Accession: A57294; S49903
R;Rothenberg, M.E.; Ellertson, C.D.; Klein, K.; Zhou, Y.; Lindberg, I.; McDonald, J. Biol. Chem. 270, 10136-10146, 1995
A;Title: Processing of mouse proglucagon by recombinant prohormone convertase 1 an A;Reference number: A57294; MUID:95247722
A;Accession: A57294
A;Cross-references: EMBL:Y07539; NID:g63749; PIDN:CAA68827.1; PID:g6:R;POllock, H.G.; Kimmel, J.R.
J. Biol. Chem. 250, 9377-9380, 1975
A;Title: Chicken glucagon. Isolation and amino acid sequence studies
A;Reference number: A92189; MUID:76069271
                                                                                                                                                                                                                                                                                                       A;Title: Nucleotide sequence determination of chicken A;Reference number: S09992; MUID:90249492 A:Accession: S09992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N;Contains: glucagon; glucagon-like peptide 1
C;Species: Gallus gallus (chicken)
C;Species: 1-Dec-1991 #sequence_revision 31-Mar-1993 #text_change 18-Jun-1999
C;Accession: S09992; A92189; A60836; A01542
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C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
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A;Molecule type: mRNA
A;Residues: 1-180 <ROT>
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A; Residues: 53-81 <BRO>
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                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-151 <HAS>
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FEBS Lett. 264, 117-120, 1990
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Pred. No. 1.3e-13;
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Pred. No. 1.3e-13;
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C;Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; F;1-22/Domain: signal sequence #status predicted <SIG>F;23-151/Product: proglucagon #status predicted <GGC>F;23-151/Product: proglucagon #status experimental <GCN>F;118-147/Product: glucagon #status experimental <GCN>F;118-147/Product: glucagon-like peptide 1 #status predicted <GL1>F;147/Modified site: amidated carboxyl end (Arg) (amide in mature form from follow
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A;Accession: A60836
C;Superfamily: glucagon C;Keywords: amidated carboxyl end; duplication F;1-30/Product: glucagon-like peptide #status of F;30/Modified site: amidated carboxyl end (Arg
                                                                                                                              Gen. Comp. Endocrinol. 82, 23-32, 1991
A;Title: The primary structure of glucagon-like
A;Reference number: A61125; MUID:91340068
A;Accession: B61125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mol. Endocrinol. 9, 267-277, 1995
A;Title: Trout and chicken proglucagon: alternative splicing
A;Reference number: A55895; MUID:95295739
A;Accession: I51301
                                                                                                                                                                                                                                                                C;Species: Anguilla rostrata (American eel)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession: I51301
R; Irwin, D.M.; Wong,
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C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
                                                                                          A; Molecule type: protein A; Residues: 1-30 < CON>
                                                                                                                                                                                                                        R; Conlon, J.M.; Andrews,
                                                                                                                                                                                                                                            C; Accession:
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A; Residues: 1-206 <IRW>
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Horm. Metab. Res. 19, 542-544, 1987
A;Title: Chicken glucagon: sequence
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A; Residues: 55-83
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Pred. No. 6.1e-12;
3; Mismatches (
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Pred. No. 8.
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                                                                                                                                                                                                                     L.; Moon, T.W.
    #status experimental <GLP>
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37

HADGTFTSDMSSYLEEKAAKEFVDWLIK

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N;Alternate names: oxyntomodulin
N;Contains: glucagon; glucagon-36 (oxyntomodulin); glucagon-like peptide 1; gluc
C;Species: Rana catesbeiana (bullfrog)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 20-Mar-1998
C;Accession: B28091; C28091; D28091
R;Pollock, H.G.; Hamilton, J.W.; Rouse, J.B.; Ebner, K.E.; Rawitch, A.B.
J, Biol. Chem. 263, 9746-9751, 1988
A;Title: Isolation of peptide hormones from the pancreas of the bullfrog (Rana c A;Reference number: A92730; MUID:88257102
A;Accession: B28091
A;Molecule type: protein
A;Residues: 1-36 <POL>
A;Accession: C28091
A;Molecule type: protein
A;Residues: 37-68 <POL>
A;Accession: D28091
A;Molecule type: protein
A;Residues: 37-68 <POL>
A;Accession: D28091
A;Molecule type: protein
                                                                                                                                                      C; Superfamily: glucagon
C; Superfamily: glucagon
C; Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F; 1-36/Product: glucagon-36 (oxyntomodulin) #status experimental <G3
F; 1-29/Product: glucagon #status predicted <GCN>
F; 37-67/Product: glucagon-like peptide 1 #status experimental <GL1>
F; 69-101/Product: glucagon-like peptide 2 #status experimental <GL2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: protein
A;Molecule type: protein
A;Residues: 1-30 <CON>
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication
F;1-30/Product: glucagon-like peptide #status experimental <GLP>
F;30/Modified site: amidated carboxyl end (Arg) #status experimental
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C:Species: Anguilla anguilla (European
C:Date: 10-Mar-1994 #sequence_revision
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R; Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
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Best Local S
Matches 21
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HAEGTFTSDVSSYLEGQAAKEFIAWLVK
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                                                                              81.9%;
75.0%;
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                                                                     Score 118; Db 1, No. 4.5e-10;
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Pred. No. 1.2e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 118; DB 2;
Pred. No. 1.2e-10;
                                                               Mismatches
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10-Mar-1994 #text_change 21-Nov-1997
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Search completed: Job time: 99 sec

July 30,

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glucagon 2 precursor - American goosefish
N:Contains: glucagon; glucagon-like peptide 1
C:Species: Lophius americanus (American goosefish)
C:Cate: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 21-Jul-2000
C:Accession: A05150
R;Lund, P.K.; Goodman, R.H.; Montminy, M.R.; Dee, P.C.; Habener, J.F.
J. Biol. Chem. 258, 3280-3284, 1983
A;Title: Anglerfish islet pre-proglucagon II. Nucleotide and corresponding A;Reference number: A05150; MUID:83135785
A;Accession: A05150
A;Accession: A05150
A;Residues: 1-122 <LUN>
A;Cross-references: GB:J00933; NID:g64021; PIDN:CAA23905.1; PID:g64022
C;Superfamily: glucagon
C:Reywords: carbohydrate metabolism: duplication; hormone; pancreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Isolation and Structures of glucagon and glucagon-like pept A;Reference number: A92514; MUID:85157536
A;Accession: A05166
A;Molecule type: protein
A;Residues: 1-29 <AND1>
A;Accession: A05167
A;Molecule type: protein
A;Accession: A05167
A;Molecule type: protein
A;Residues: 30-63 <AND2>
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F;1-29/Froduct: glucagon-like peptide 1 #status experimental <GL1>
F;30-63/Product: glucagon-like peptide 1 #status experimental <GL1>
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J. Biol. Cl
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                                                                                                                                                                                                 F;1-21/Domain: signal sequence #status predicted <STG>
F;22-122/Product: proglucagon 2 #status predicted <PGC2>
F;52-80/Product: glucagon #status predicted <GCN>
F;89-119/Product: glucagon-like peptide 1 #status predict
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Best Local
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                                            1 HAEGTFTSDVSSYLEGQAAKEFIAWL 26
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HADGTYTSDVSSYLQDQAAKDFVSWL
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hem. 260, 3910-3914, 1985
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                                                                                        Conservative
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73.1%;
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                                                                                                             Score 112;
Pred. No. 4.
                                                                                        Mismatches
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